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* Died, May 5th, 1904. In his place, John F. Lewis was appointed.

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- 1893 Lewis, Howard W., 427 Chestnut Street.
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PROCEEDINGS.

1904.

JANUARY 7TH.

Mr. Maxwell Sommerville exhibited a vase $4\frac{1}{4}$ inches high, of blue with some red decoration, about three centuries old, also a pilgrim bottle, 6 inches high, dark red decoration, about two centuries old, both beautiful specimens of Persian ceramic art; also a leather bath or prayer bowl from Ecbatana, $5\frac{1}{2}$ inches in diameter, incrustated with gold wire; it was used by being raised with both hands and the water poured on the head at the end of a prayer. He also showed a collection of antique gems and a small Assyrian cylinder of meteoric iron; also an oval box $1\frac{3}{4}$ inches long, from Burmah, of an imitation of jade with a jeweled top, all of glass; it was used to contain betel nut and is of the kind a well-to-do man would carry, the richer classes using more valuable boxes.

Mr. John T. Morris asked about the celebrated iron pillar at Delhi, near Kutub-Minar. Mr. Benjamin Smith Lyman said it was of wrought iron, partly underground, and that he had written a paper on the subject thirty-two years ago, which was published at the time (*United States Railroad and Mining Register of Philadelphia* for April 18th, 1872).

Mr. Richard W. Davids exhibited pieces of two lire, one lire and twenty-five centesimi of the new issue of Italy; also a Fugio cent with an incuse impression on the reverse of the obverse of another like coin, one of which had not been taken from the dies before the other was struck; this error seems to have been more or less common on our Continental coins.

Mr. John F. Lewis presented a bronze medal box by Orme, with a Wellington head, the top and bottom being struck from dies; these were issued soon after the battle of Waterloo and were intended to hold a series of circular pictures now missing; he also presented a galvanoplastic reproduction of a Henry Clay medal.

Mr. Morris exhibited two eikons; one about 12 inches high, a crucifix surrounded by small panels with sacred subjects, brazed together and an inscription on the back (see pages 17 and 19); also a cruciform specimen of cast bronze about $4\frac{1}{4}$ inches long; these two are Russian. He also showed a silver cross of unusual design, ornamented with filagree work soldered on and attached to a long chain formed of thin rings; this was from Skåne, Sweden.

The Treasurer, Mr. Harry Rogers, read his annual report, showing the balance on hand to be \$1,121.76, and also stated that the permanent fund had been overdrawn \$224.69.

FEBRUARY 4TH, 1904.

Mr. Maxwell Sommerville exhibited a watch almost entirely of wood, said to have been made about 1775; there was one exactly like it in the Imperial collection in the Museum at Berlin in 1875.

Mr. John T. Morris made some remarks on the difference between the same name as written by men of different castes in Egypt, each being almost unreadable by the writer of the other. Mr. Sommerville spoke of the variation of book and colloquial Arabic.

Mr. Charles H. Cramp remarked that there was an exceedingly good chapter on eikons in Senator Beveridge's recent book, *The Russian Advance*.

MARCH 3D, 1904.

Mr. Harry Rogers exhibited a fine gold medal struck by order of Napoleon to commemorate the birth of the King of Rome.

Mr. Stuart Wood was elected a Resident Member and the resignations of Dr. Jayne and Mr. B. V. Mein were accepted.

Dr. George Byron Gordon read a highly interesting paper on his recent excavations, entitled "The Ruins of Copan, Honduras," profusely illustrated with lantern views. He spoke particularly of the monolithic remains of the ancient city of Quirigua situated near Copan and later of the ruins of Copan itself, and dwelt at length on a great amphitheatre in the form of three sides of a square with a pyramid surmounted by a platform on the fourth. He spoke also of the remains of the temples with the steps leading to them, these temples having been built on the tops of the walls inclosing the arena. In this were also monolithic statues smaller than those described earlier. He also spoke of the gradual inter-



6. The Lord.
7. The Tzar (The King). The Lord (The Saviour) above these two inscriptions. The Angels of God.

8. The sign for Jesus

12. From thy Crucifixion comes thy Salvation. 13. St. Peter, St. Michael.
14. St. Gabriel, St. Paul. 15. Our Saints Mary and Mary Magdalene. 16. St. Joseph, St. John. 17. Initial of words. 18. Jesus. 19. Christ.

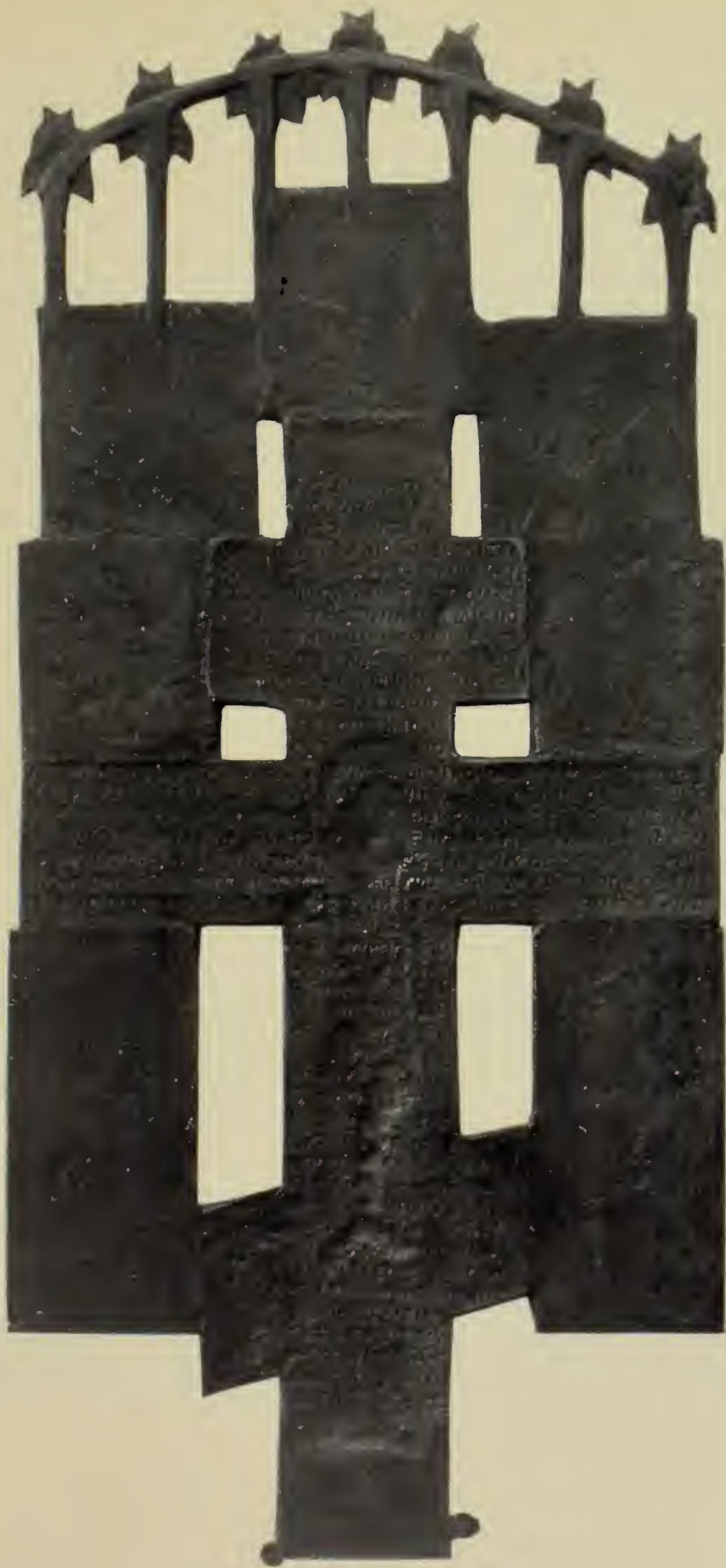
repeated four times. The initials I. N. Z. N.

9. The Crucifixion of the Lord God.

10. Crucifixion of Jesus Christ. The Son of God.

11. To the Cross.

Russian Brass Cross. (Obverse.)



Russian Brass Cross with writing in Old Slavonic Russian. (Reverse.)
For translation, see page 20.

INSCRIPTION ON REVERSE OF CROSS.

Translated from Old Slavonic Russian.

Christus the Saviour of the whole universe
Christus the Beauty of the Church
Christus the King of the Dominion (Kings)
Christus the Blessed
Christus the Everliving—

And God said "I have suffered the penitence (punishment) for the sake of your returning to me from your evil-doings before the terrible day of Judgment has come—

To many of you I have shown the road to safety and joy by myself forgiving you in kindness.

For your sake I turned into flesh and for your sake I have labored—
For your sake I was tormented and for your sake I was bound— I law-giver, for your sake was cursed— For your sake I was spit at—

For your sake I was on the cross— For your sake I have taken nails in my hands and feet— For your sake I was beaten with a rod— For your sake I have tasted the gall and for your sake I was pierced through with a spear—in my (Illegible.)

For your sake I have accepted death

For your sake I laid in the grave, and for your sake I went to the infernal regions coming out of it from darkness into light and I was resurrected, showing you the resurrection from death. And I went into Heaven—

For your sake I have sent my Apostles into the world to preach the Kingdom, and I have given to you as teachers the great and exemplary learned men to preach to you again of my Holiness (partly illegible.)



Great seated figure brought to light in the excavation of the hieroglyphic stairway at Copan.

pretation of the hieroglyphics largely covering the monoliths and steps and said that those relating to their system of chronology had been quite satisfactorily translated.

APRIL 7TH, 1904.

Messrs. B. E. Ogden and Francis C. Adler were elected Resident Members.

Mr. Richard W. Davids read a paper on the "Expression of Value on Some Coins," illustrated with many of the pieces mentioned (see page 51).

Mr. Lyman read his translation of a paper in the Bulletins of the Paris Anthropological Society (1903, No. 2, p. 201), on the "Physical Training Among the Yogi Sects," by Madame Alexander Myrial. The paper treats chiefly of the physical exercises used by the Shivaite Yogists, who comprised almost all the Yogis of India, an ascetic sect that arose about 300 B. C. Other Yogist schools, both Brahman and Buddhistic, differ somewhat in their methods, and one of them even disapproves altogether of physical practices for the attainment of the goal toward which strive not only Yogis but all Hindoo sects, whether Brahmins, Jainas or Buddhist, namely to escape rebirth through complete loss of individual existence by absorption in the Universal Life. The physical exercises are vaguely scientific, and are claimed to be hygienic or therapeutic and to develop the senses and physical qualities to magical results, and are of four kinds: Postures of the body (*âsana*), breathing exercises (*pranayama*), certain exercises compounded of attitudes and respiration or divers other operations (*mudrâ*), and the supreme ecstasy (*samadhi*), absorption of man's spirit in the Universal Soul, "as a grain of salt fallen into water unites with it." But the ecstasy with the Yogis is in reality almost always an hypnotic or cataleptic state. A few examples of the hundred at least (80,000 are claimed) of each class of exercises were described; for instance, postures of meditation, sitting upon the heels, the chin upon the breast and the eyes fixed upon the point of the nose or on its root between the brows; holding in the breath, gradually longer and longer, up, it is claimed, to twelve days, cleansing the nostrils by a thread or fine ribbon drawn through them, and the stomach in a like manner; cutting by fine degrees the cord that holds back the tongue; listening to the gradually more distant and subtle sounds

heard within the body ; arriving, it is claimed, after many years of methodical and extremely diligent daily practice, at complete ecstasy, with various accompanying phenomena, such as invulnerability and levitation.

Mr. John T. Morris exhibited a cribbage board made of a walrus tusk, the work being by Esquimaux of St. Michael's, Alaska. The etching was done with an old knife ground to a proper point and filled with the ashes of burnt paper, the subjects being different kinds of trees and fish and a coast view showing the mountains in good perspective.

MAY 5TH, 1904.

Mr. Benjamin Smith Lyman read a paper on "Hindoo Marriage Customs" (see page 57).

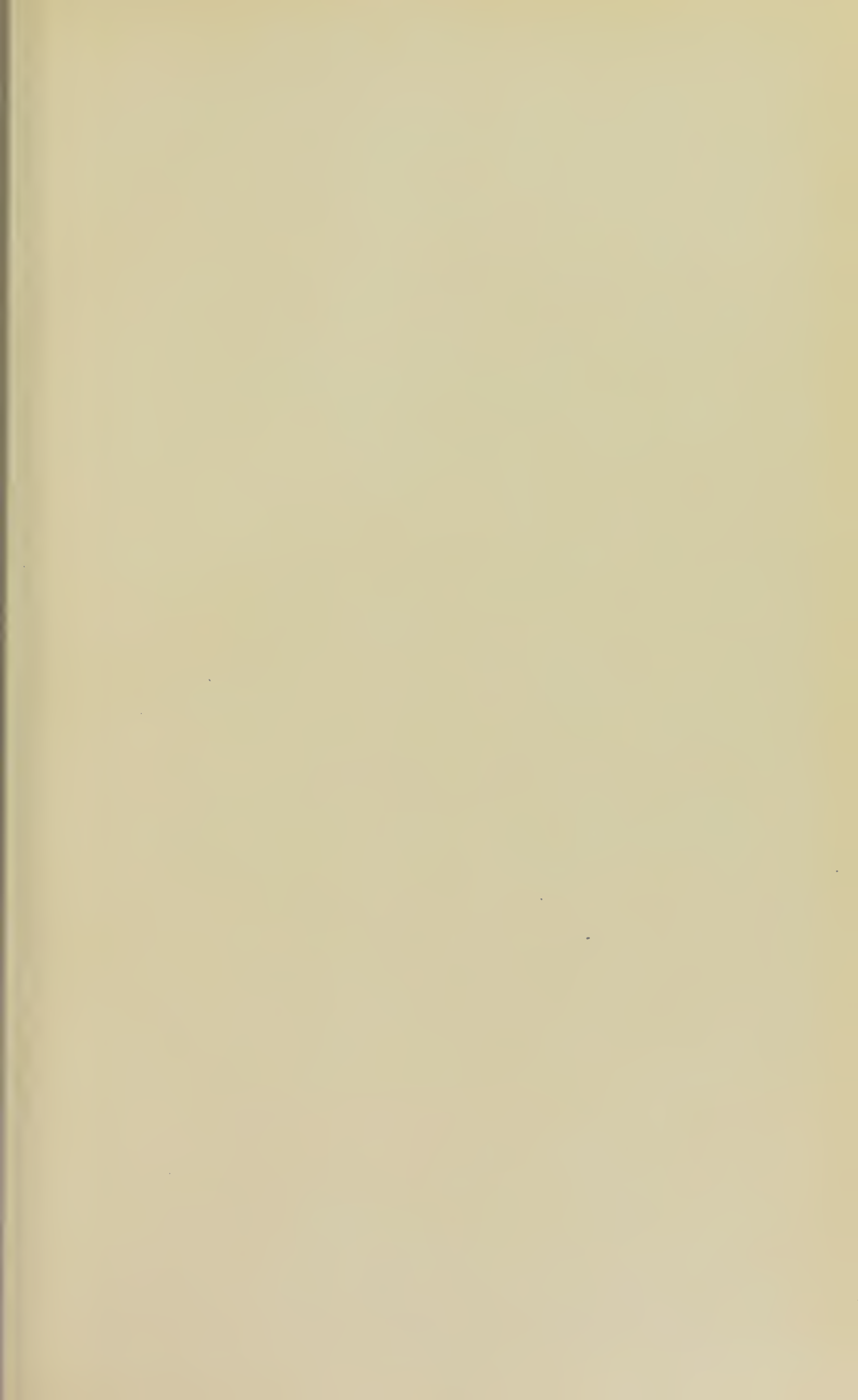
OCTOBER 6TH, 1904.

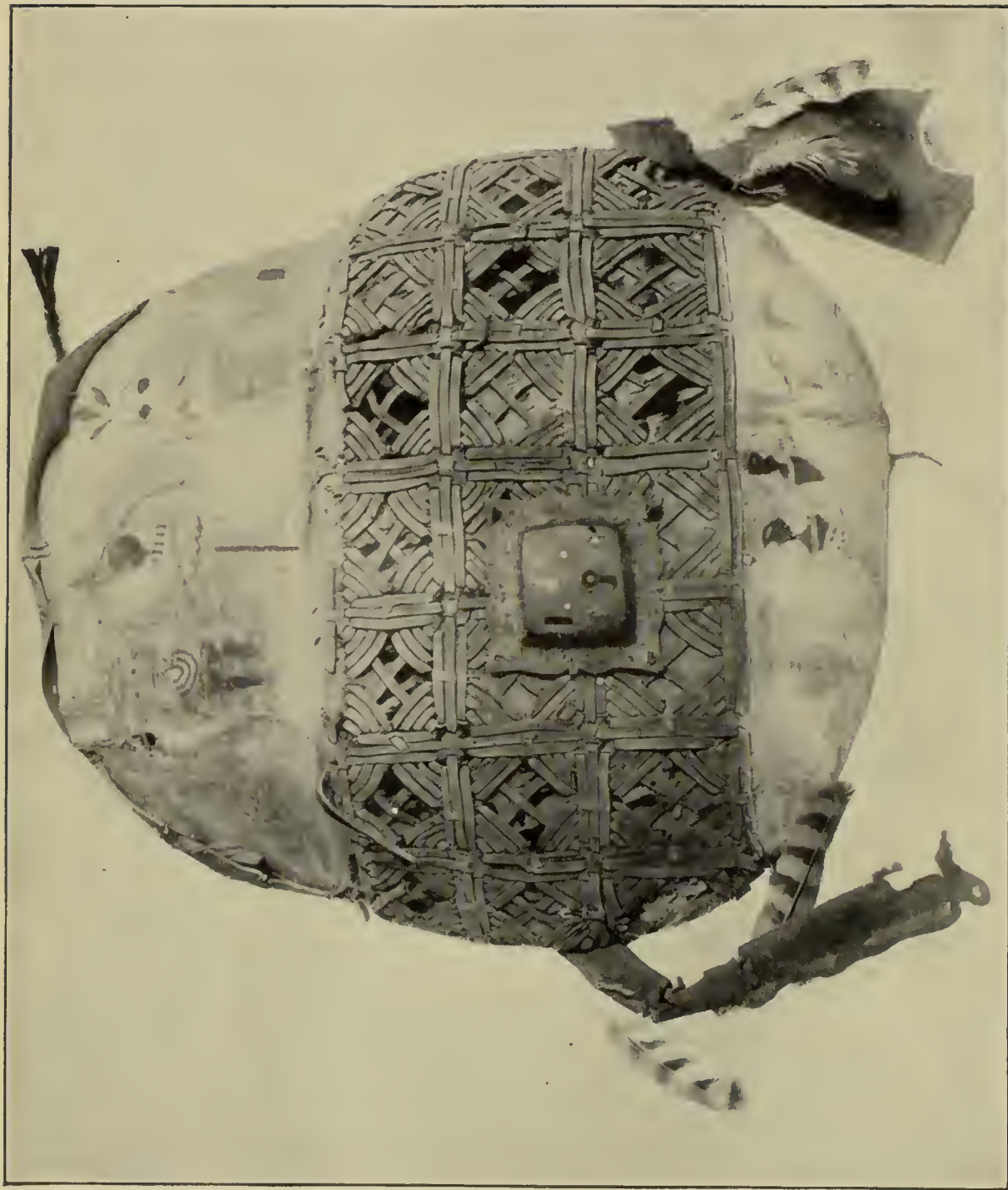
The following deaths were announced : Vice President Maxwell Sommerville, on May 5th, 1904, in Paris ; Mr. Edward Gilbertson, of Ilfracombe, England, on July 23d, 1904, in his ninety-second year ; Dr. Frederick Horner, Jr., of Virginia ; Chevalier J. P. N. DaSilva, of Lisbon, some years ago ; and William Sumner Appleton, of Boston, born January 11th, 1840, died April 29th, 1903. The last four were Corresponding Members.

Mr. Benjamin Smith Lyman reported the receipt from the Duc de Loubat of a valuable reproduction published by himself of a post-Columbian codex with Spanish text ; also a book on the Paper Money of Brazil, with fac-similes of the notes published and presented by Julius Meili, of Zurich, Switzerland. There was reported by Curator Langenheim the receipt of a metal badge commemorative of General J. B. Gordon, and through Curator Bailey the receipt of a book on Archæological Remains in Tennessee, by and both from General Gates P. Thruston, a Corresponding Member.

Mr. John T. Morris reported that a very fine collection of armor had lately been placed on exhibition at Memorial Hall, and that it was well worthy of inspection.

Mr. Westcott Bailey showed some curiosities from Mexico : one an ivory image of the Virgin about six inches high, having a hole in the top of the head, with small outlets in the eyes, by putting a red liquid in the former the figure appeared to weep blood ;





This curious shield was purchased by the present owner about three years ago in Arizona, from an Apache chief, and is a very unusual relic. It is made of an old Spanish leather trunk, said to have been taken from a traveler many years ago by the Apache Indians, who killed the owner.

It will be observed that the iron lock has been allowed to remain on the front of the shield, thus affording an additional protection against spears, arrows, etc., should they strike this particular spot.

another, a cigar case of bead work with a priest's name wrought in, supposed to be old; also an ornate silver casket presented to Maximilian; it was made to contain the bullet by which he was wounded; this had been removed. Also a leather shield made by Apache Indians, fashioned from an old Spanish trunk, with the lock still in place; the shield was decorated with colored drawings and some very fine leather lace work.

Mr. John T. Morris exhibited an antique bronze mirror, much corroded, with a handle of old wood, probably not the original; a scimitar knife, Coptic cross and celt, all bought by him in Egypt.

Mr. Richard W. Davids exhibited a few small pieces of antique bronze said to date from about the Christian era or earlier. Among them were a mirror nearly five inches in diameter, four fibulæ, a key, some figures and parts, all from near Naples; also two celts from France one of which showed signs of use, the other being nearly unused; the parting bead showed that it had been cast in a split mould, as would be done in the present day.

Using a letter from Mr. Charles E. Dana as a motion, it was ordered to send a copy of the Brinton Medal to the Art Department of the Congressional Library at Washington.

NOVEMBER 3D, 1904.

The death of Marquis de Nadaillac, a Corresponding Member, was announced.

Mr. John T. Morris, in reply to a letter from Dr. S. Weir Mitchell asking for information about a "pulse watch" by Quare, which had only one hand showing seconds, reported that he had found in Brittin, *Old Clocks and Watches*, 2d Edition, p. 225, the following: "Watches with seconds hands. The watch by Fitler, dating from about 1665, which, as shown in Fig. 244, has a seconds dial on the back of the movement, seems to have been quite an exceptional application of a seconds indicator for watches. Sir John Floger, a physician, in 1707 speaks of the 'Physicians' Pulse Watch,' which he had invented to take the place of the 'common sea minute glass' with which and 'common watches' he had been in the habit of trying pulses. The pulse watch which he caused to be made ran, he said, for 60 seconds. Harrison's time-keeper with a centre seconds hand was tested 1760, and seconds hands were not usually applied to watches till after that date."

The receipt of a large unbound reproduction of a Mexican codex, published and given by the Duc de Loubat, was reported.

Mr. Charles J. Cohen exhibited and presented a bronze medal designed by Professor Beer of Florence, Italy, in commemoration of the Zionist Congress which is held annually at the city of Basel, Switzerland; on the obverse are well executed figures and on the reverse a text from Ezekiel 34: 13; also a 2-lire piece of Victor Emmanuel III.; and two pieces of 25 centesimi and one each 2c and 1c of the current Italian issue. On his motion it was directed that a copy of the Brinton Medal be given to the Academy of Natural Sciences of this city.

Mr. Charles L. Hamilton was elected a Resident Member.

Mr. Charles J. Cohen exhibited photographs of Assyrian antiquities now in the Louvre, one showing the main ornaments in terra cotta of the Pylons of the Palace of Artaxerxes Mnemon, with lions in the same material; the other the winged bulls from the Palace of Sargon.

DECEMBER 1ST, 1904.

Mr. Richard W. Davids exhibited a miniature in a well wrought bronze hinged case which had been gilded; it is by Gabriel Le Clerc, 1688, and is believed to be of François Cordier, an Oratorien.

Mr. Harry Rogers's report, as Treasurer, was read and accepted; it showed receipts of \$340.31, expenditures of \$608.90, of which \$418.89 was for the *Proceedings*. The report was audited and found correct. The Nominating Committee appointed at the last meeting, and consisting of Messrs. Smyth, W. Bailey and J. F. Lewis, reported that Mr. John T. Morris had asked that his name should not be considered for re-election as President and that they had nominated Mr. Charles E. Dana for that office, and recommended that the new President suggest candidates for the other offices and appoint a committee of five to make such nominations and other recommendations deemed necessary towards the reorganization of the Society.

The report was accepted, Mr. Dana elected President, and asked by the retiring President to take the chair, which he did. Mr. John F. Lewis offered the following, which was carried unanimously: Resolved, That the Numismatic and Antiquarian Society of Philadelphia herewith records its regret that Mr. John

T. Morris has declined a renomination for President, and its deep appreciation of the impartial and disinterested way in which he has acted as President of the Society during his incumbency of five years.

President Dana being so authorized named as a Committee as above: Messrs. Smyth, J. F. Lewis, Morris and Cohen. Officers and Committees were then elected for the year 1905, the list of which as finally corrected (appointments having been made by the President to take the place of those declining) appears on page 5.

1905.

JANUARY 5TH.

Meeting at Prof. Charles E. Dana's, 2013 DeLancey Place.

The Committee appointed at the last meeting suggested, among other things, that the present long order of business be curtailed, and that the meetings hereafter be held at the houses of members and only simple entertainment be provided. On motion the report was accepted and so much as could be acted on at this meeting, namely, that relating to place of meeting and entertainment, was adopted.

On motion it was unanimously resolved to express the thanks of the Society to Mr. John T. Morris for his generosity and kindness in defraying a large part of the cost of the late issue of the *Proceedings*, thereby making its publication possible. Mr. Charles E. Dana read a paper entitled "Swords and Swordsmanship," and exhibited a number of pieces from his own collection (see page 63).

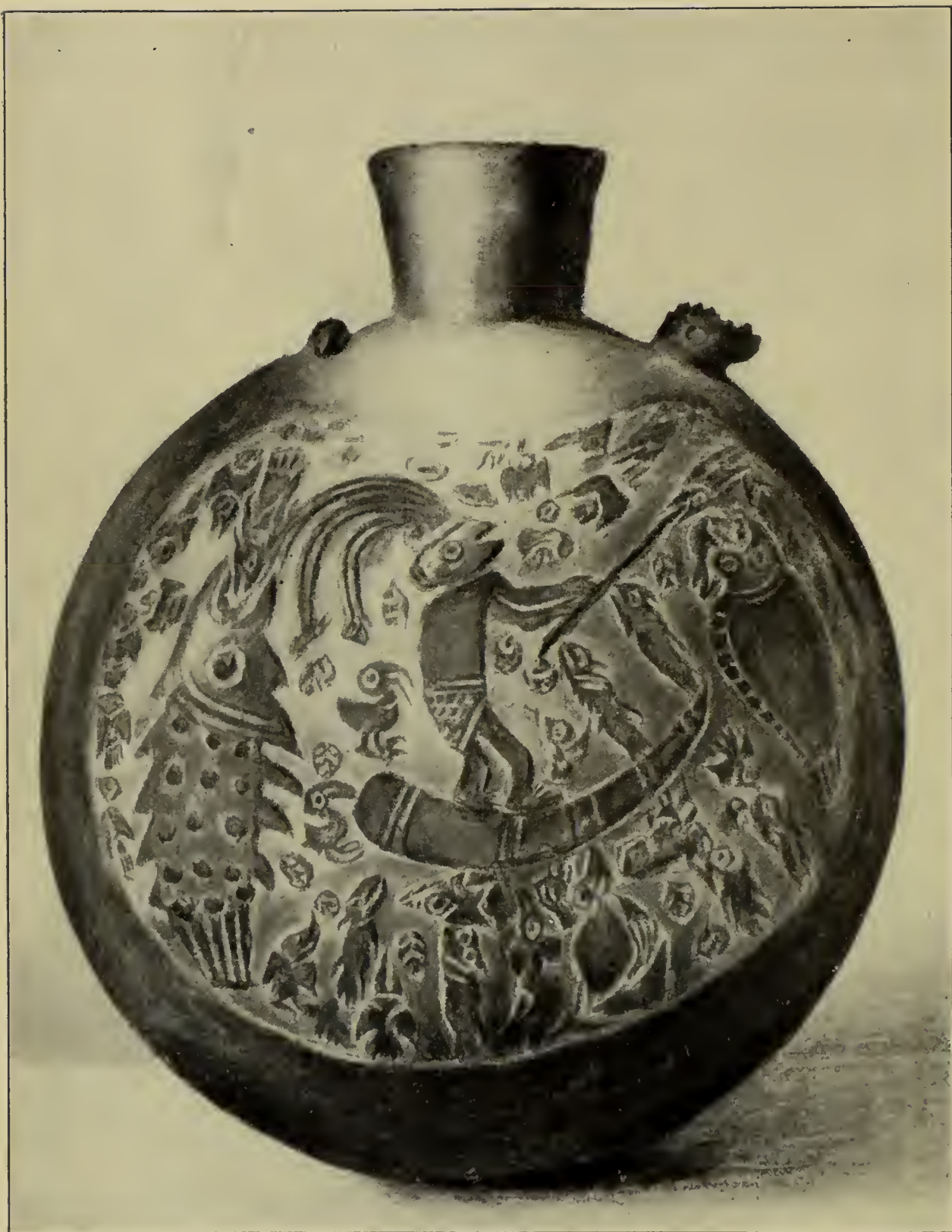
FEBRUARY 2D, 1905.

The meeting was held in Mr. Cornelius Stevenson's, 237 South 21st Street. Mr. F. Gutekunst's resignation was read and accepted. Certain amendments to the By-Laws were adopted, by which the Committees on Hall and Finance were stricken out and those on Membership and Program added.

Mr. Charles L. Hamilton exhibited a shaving mug of the first American Rockingham ware, made about 1840; also a dish, part of a set presented to General Washington by the officers of the French army in 1784, on the occasion of their joining the Society of the Cincinnati; it is of Canton ware and bears the American eagle; also a plate of Nankin, probably Colonial, has "C" in center and is part of a set belonging to the Cadwalader family bought at the recent sale; also a pitcher of Tucker china bearing the date 1828.

Prof. F. W. Putnam, of the Peabody Museum, Harvard University, and of the Anthropological Department of the University of California, gave an informal and highly interesting talk on "Early American Pottery," illustrated by a few specimens from the Museum of the University of Pennsylvania, and by many drawings of typical examples from the collections in the Peabody Museum. In his remarks Professor Putnam demonstrated that much can be learned regarding the life and culture of a people by the study of its pottery, passing from the simple forms and





Large Water Bottle from Chimbote, Peru. Illustrating a Vessel cast in Two Moulds. Peabody Museum, No. 9902. Gift of Dr. A. Agassiz.

crudely decorated pieces of the period of savagery to the diversified forms of the several stages of culture, when utilitarian vessels of cosmical shapes were often of realistic designs which passed into conventionalized forms. In the pottery of many peoples, the higher development of symbolism, expressive of ceremonial and religious life, can be traced, and in the case of the peoples representing the highest culture on the continent, the ceramic art often became the means of expressing the attributes of the gods and also became an important adjunct to burial customs. In this higher culture, the worker in clay and the decorative artist combined to produce many beautiful vessels, particularly in Mexico, Central America and Peru, which exhibit in their method of manufacture, their forms and their decorations in color a degree of perfection that is only surpassed by the higher types of classic art.

Professor Putnam called attention to the methods of preparing the clay which, as a rule, was mixed with sand, pounded shell, vegetable fibres or powdered potsherds or other substances so as to prevent the vessel from cracking while the clay was shrinking in drying, burning and baking. He showed how the vessels were shaped either over a form or in a basket or net or in some other way to keep the shape of the wet clay until it hardened sufficiently to be handled and burned. The most usual process of manufacture was by coiling bands or ropes of clay and, beginning at the bottom, shaping the vessel as the work progressed. Another method, common from Mexico to Peru, was that of casting the vessel in two or more moulds and then putting these pieces together (See illustration). In other instances the potter became a sculptor and ornamented the vessel either by designs in relief or by incised designs upon the surface of the vessel. When cord, basketry or woven fabrics were used in forming or decorating the vessel, the character of the basketry or the twisting and weaving of the threads can be studied by making moulds of the surface of the vessel, thus securing the form and texture of the object that had made the impression upon the clay before it was burnt. In this way a knowledge of the ancient fabrics can be obtained when no other trace of the fabric is at hand. He stated that the potter's wheel was not used in America prior to Spanish contact.

When speaking of the colored designs on the pottery from the ruins of Copan, in Honduras, Professor Putnam paid a tribute to the work of Dr. G. B. Gordon, now the Curator of American Archaeology in the Museum of the University of Pennsylvania, who,

had charge of several expeditions to Copan, and who made the drawings of the Copan pottery which were exhibited. He added that he hoped Dr. Gordon would, at some future meeting, inform the members regarding the hieroglyphic inscriptions on some of the vessels, as well as those on the great sculptured monoliths of which he had made a special study. In conclusion, Professor Putnam called attention to the instructive exhibit of pottery in the Free Museum of Science and Art, University of Pennsylvania, where the members of the Society could see many examples of the different phases of the ceramic art of America to which he had alluded. He also stated that the largest and most important collection of pottery illustrating the many singular and unique forms of pottery from the mounds of Georgia and Florida was to be seen in the Moore collection in the Academy of Sciences. There are many forms in that collection, he said, to which he had not been able to refer, and he advised the members to make a study of this pottery from the Gulf States. At the close of his remarks a resolution of thanks was tendered to Professor Putnam for his instructive and entertaining address.

MARCH 2D, 1905.

The meeting was held at Mr. John T. Morris's, 826 Pine Street.

The By-Laws were changed, authorizing the omission of the October meeting.

Dr. G. B. Gordon, of the University of Pennsylvania, gave an informal talk on "Recent Investigations in Central American Archæology," illustrated with lantern-slides. Dr. Gordon spoke especially of the work being done in deciphering the hieroglyphic inscriptions found on the monuments and other carved stones, on wooden tablets and the ancient manuscripts, of which only four have come down to us.

These inscriptions are believed to be written in the ancient Maya language and in a character partly phonetic and partly ideographic, but no key has been found that will enable investigators to translate the inscriptions, though by the aid of certain manuscripts written in modern Maya and in Roman letters, about the middle of the sixteenth century, by Indian priests who had learned to use our alphabet and apply it to their language, much has been learned concerning the hieroglyphics and the character of the inscriptions. These manuscripts, called the books of Chilán Balam, after the title of the class of priests whose work they are,

contain certain texts written both in the hieroglyphic system and in modern Maya and having reference to earlier hieroglyphic texts; and these texts, together with a brief manuscript written about the same time by the Spanish Bishop Landa, have supplied the clew to the ancient calendar and the chronological system employed by those who carved the inscriptions.

The calendar was constructed on the basis of a year of 365 days, divided into 18 months of 20 days each, with a short month of 5 days at the end. Each day was distinguished by a name, but there was a series of numbers, from 1 to 13, which ran collaterally with these names. It took 52 years for this arrangement of the days and the corresponding numbers to complete itself and repeat itself in the same order. This gave the 52-year cycle. Dr. Gordon showed that it was possible to reconstruct this calendar in 13 parts, each part having four years at intervals of 13 years, each of these years having a different Dominical.

After much uncertainty and research it has been discovered that there was another chronological calendar used to mark the time from an era very remote and not identified. This is a vigesimal system, counting by days, months, years, and three larger units, each twenty times the former (except there are eighteen months exactly to a year). Nearly all monuments have dates given in this system, so that by calculation and comparison of the two modes of reckoning it has been found that all dates in the latter system reckon from the era already mentioned. According to the deciphered dates, that era went back several thousand years, though the dates recovered are from the earliest to the latest less than 500 years apart. Many characters taken from the recovered hieroglyphs were shown and compared.

Dr. Gordon gave again a brief account of the excavations conducted under the auspices of Harvard University, illustrating it with pictures of the monoliths and other remains he had discovered, both at Copan and Chirigua. (See minutes of March 3d, 1904.)

At the conclusion of his remarks, a vote of thanks for this very interesting talk was given Dr. Gordon.

Mr. Westcott Bailey exhibited a highly ornamented piece of personal adornment in two pieces buckling together; each piece, approximately eighteen by four inches, consisted of circular and triangular plates connected by two series of six chains, all in silver, said to contain much gold; the special devices in the orna-

ments were lions rampant with knotted serpents between. There were also as part of the same exhibit numerous separate ornaments resembling bells, spheres, etc., about the size of hen's eggs, intended to be sewed on the clothes. The whole had been bought lately in Mexico and is said to have been brought from Europe by a Hungarian whose story was that it had belonged to a king of the gypsies.

APRIL 6, 1905.

The meeting was held at Mr. Howard W. Lewis's, 1928 Spruce Street.

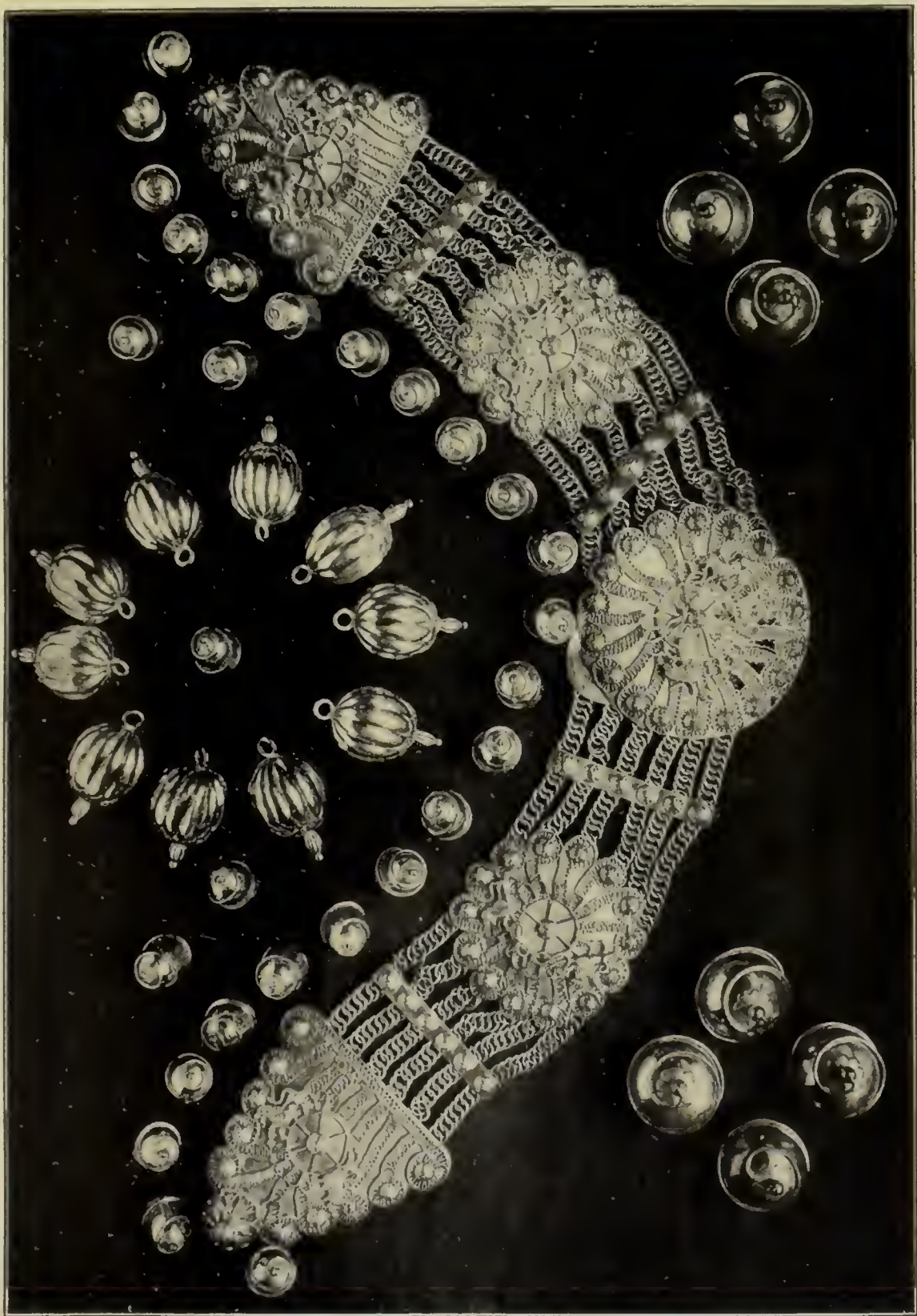
The death of Mr. E. W. Greenough, a Resident Member, was announced.

Mr. Charles H. Cramp's paper on "Certain Incidents in the Evolution of the Modern Warship" was read (See page 105).

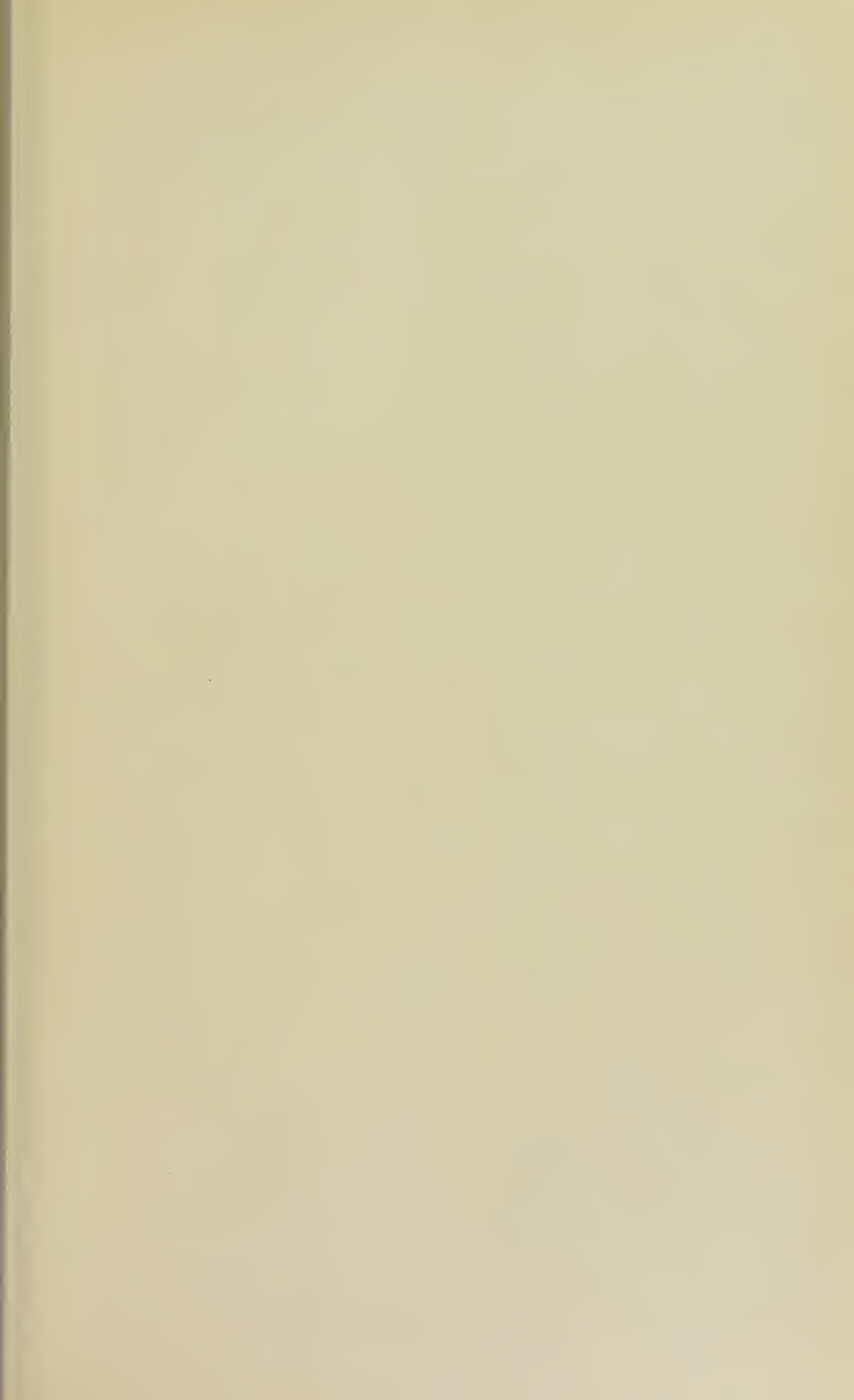
After the reading of Mr. Cramp's paper, replying to certain strictures on the "Monitor" contained therein, Mr. Dana remarked that Ericsson's "Monitor" was the first practical demonstration of the turret system, and that while that vessel was faulty in several important details, she accomplished all that was claimed for her and even more, for the turret system has ever since been retained as superior to the broadside system for the protection of heavy guns. Mr. Dana, replying to Mr. Cramp's statement that one important factor in the disappearance of our flag from the ocean carrying trade was the prejudice against the screw-propeller shown by New York shipbuilders, reviewed the spirit manifested by Great Britain in experimenting with and then rapidly adopting the screw-propellor. Mr. Dana attributed our commercial defeat, which was plain to all as early as, say, 1855, to the use of steamers by the British while we adhered to sailing vessels, their early adoption of iron ships, and above all to the ruinous effect of our barbarous navigation laws and finally to our tariff.

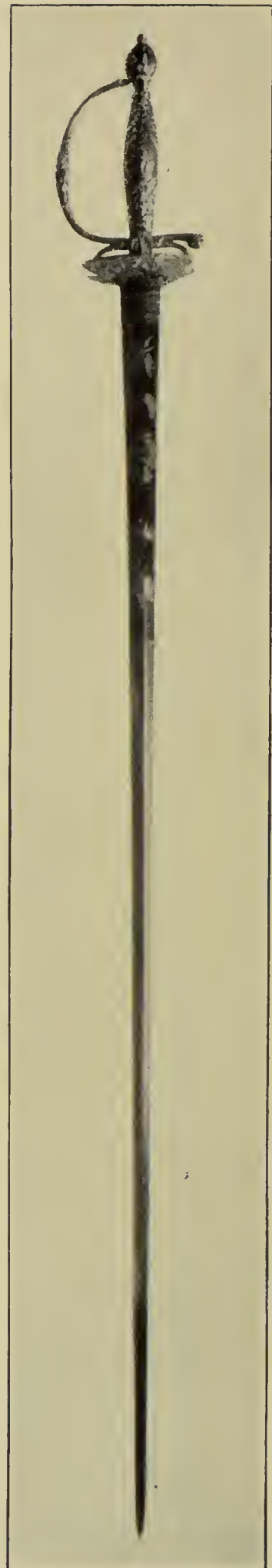
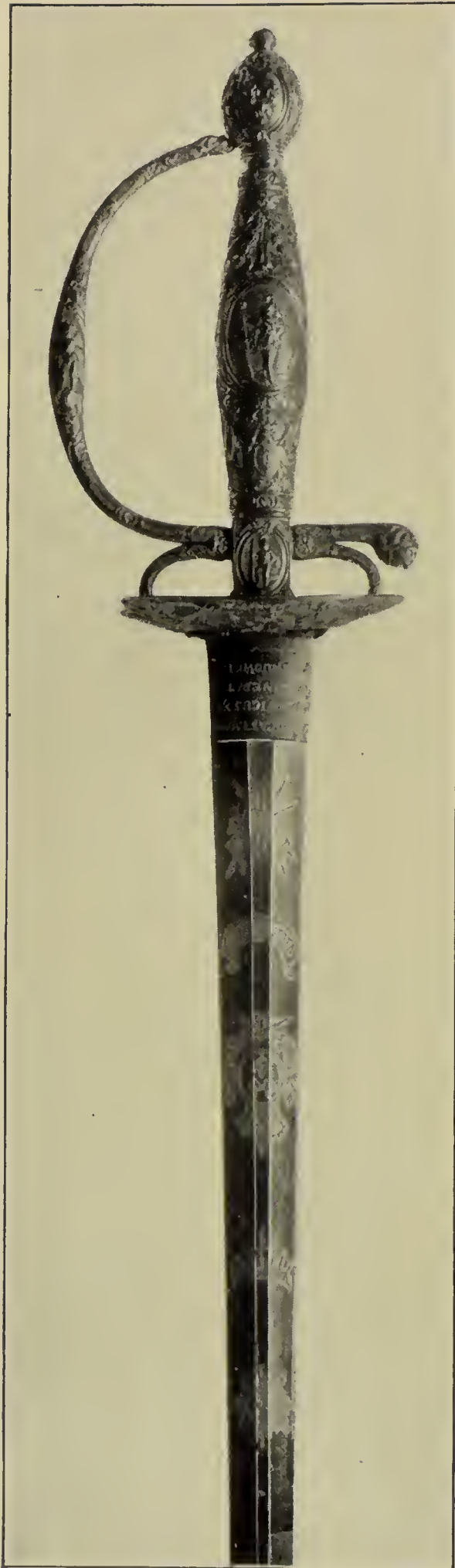
Mr. Cramp replied, giving credit to Captain Cowper Coles of the British Navy for first suggesting the turret system and its advantages. He also stated that monitors at the siege of Charleston, during the Civil War, after being exposed to a heavy fire, were always so greatly damaged that they required from two to three months to make the repairs necessary to enable them to return to active service.

This statement was thought to be an error by a naval officer



Gipsy Ornament from Hungary.





Dress Sword Presented by Louis XVI. to John Paul Jones.

who had served with the fleet of monitors (Robert P. Lisle) and others present. Mr. Cramp also gave a most vivid and interesting, though by no means pleasant, picture of the personality of Ericsson.

By request, Mr. Richard Dale exhibited the sword presented by Louis XVI to John Paul Jones, a beautiful as well as historical relic, which at his death passed by will to his chief officer, Richard Dale, in whose family it has since remained.

This historical relic is a fine specimen of designing, chasing, and the swordsmith's craft, and the correct proportions and careful considerations to every detail which it displays are particularly worthy of attention.

The hilt is of gold chased over with figures and floral decorations. The blade is four-sided, tapers to a point, and is $33\frac{1}{2}$ inches in length. It is blued for 11 inches from the hilt, and on one side of the recasso is inscribed the words in gold:

VINDICATOR MARIS
LUDOVICUS XVI
REMUNERATOR
STRENUO VICTOR

"Louis XVI, rewarder of the valiant, asserter of the freedom of the sea."

On the other side is lightly engraved a motto, which has become obliterated by time. Below the recasso, inlaid in gold, is the sun and three *fleur de lis* surmounted by a crown, and the motto, "Vive le Roy."

One side of the grip is adorned with a medallion of Mars, and on the reverse another of Hercules with a club, and festoons and ribbons held in the mouth of a mythological animal. Below is a standard of flags.

The pommel is made up of two designs: One three *fleur de lis*; the other a figure of Neptune with his trident.

The upper surface of the guard plate is ornamented on both sides; on one side a medallion of Minerva, on the other that of Mars, and on the lower surface a similar medallion of Minerva and *fleur de lis*.

The pas d'âne and guard are beautifully chased with floral designs and terminate in dolphins' heads.

This sword was presented by the King to Paul Jones in July, 1780, probably in admiration for his remarkable victories at sea.

At the same time he conferred upon him the Royal Order of Military Merit. This decoration carries with it letters patent to the rank and title of Chevalier, corresponding in France to knighthood in England. Paul Jones, while making his will, orally bequeathed this sword to Richard Dale, through the hands of Gouverneur Morris, who delivered it to Dale at the first opportunity. Jones's words of bequest were: "I give this sword to Richard Dale, my good old Dick—because he did more than any other to help me win it!" (See Buell's *History of Paul Jones*, Vol. 2, page 4.) Richard Dale bequeathed it to John Montgomery Dale, his son, from whom it descended to Colonel Richard Dale, grandson of the first Richard Dale, in whose possession it now is.

To Mr. Richard Dale the thanks of the Society were tendered for his courtesy in exhibiting this most interesting sword as also for permission to illustrate it in the forthcoming *Proceedings*.

Mr. C. E. Dana exhibited a copy of the bronze medal struck by the United States commemorating the participation of Col. William Augustine Washington in the Battle of Cowpens, when he commanded the cavalry.

The following pieces belonging to Mr. H. W. Lewis were exhibited: a copy by Wedgwood of the Portland vase and a Canton ware teapot of the blue butterfly pattern about eighty years old; this had no opening at the top as usual, the brewed tea was poured through a tube, part of the pot, opening in the base and extending to near the top inside, the idea being to keep the aroma from escaping.

MAY 4TH, 1905.

The meeting was held at Mr. Charles J. Cohen's, 334 South 21st Street.

Mr. Charles J. Cohen, a Resident Member of the Society, read a paper entitled, "Ancient Jewish Ceremonial," illustrated with lantern views. Mr. Cohen opened his paper by a well-timed reference to the present interest in biblical archæology, the desire for critical investigation, with recognition, however, of the splendid moral truths that lie at the basis of all biblical teaching. A concise survey was made of the early history of the Children of Israel, with an account of the exodus from Egypt, the establishment of the tabernacle down to the building of the temple under King Solomon.

The creation of the synagogue was shown as belonging to the time of Ezra, the Scribe, in the fifth century, B. C., and an account

was given of the various religious and literary activities exercised by the Jewish people during their residence in Jerusalem and subsequently during the exile in Babylon, as well as following that period down to the reconstruction of the Temple in Jerusalem under Herod. This account was accompanied by lantern views, some of which were taken from old English prints and others from various sources, covering many of the incidents described in the Pentateuch.

Other illustrations showed the tabernacle and the various vessels used in the sacrificial service. An exhibit was subsequently made by Mr. Cohen of the silver breastplate used at the present time in the synagogue worship; this is made in the form and style as described in the Pentateuch, the colors of the stones indicating the twelve tribes and being arranged to represent the original jewels when worn by the high priest. A pair of silver bells also used in the synagogue worship was exhibited, their origin and general use being described in the context of the paper as read.

NOVEMBER 2D, 1905.

The meeting was held at Mr. Carroll Smyth's, 2110 Walnut Street.

The following deaths were announced: Henry Iüngerich, Resident Member, and Albert L. Long, Charles G. Loring, and Max Wilmersdoerffer.

Mr. Carroll Smyth read a paper on "Illustrators of Dante," with lantern slides of portraits and pictures. This was highly appreciated and showed a large knowledge of the subject considered (see page 129).

DECEMBER 7TH, 1905.

The meeting was held at Mr. John F. Lewis's, 1914 Spruce Street.

Mr. Inman Horner read an obituary of our late Vice President Maxwell Sommerville (see page 133).

Messrs. Frank D. LaLanne and William W. Longstreth were elected Resident Members.

Officers and members of committees for the year 1906 were duly elected (see page 6).

The death of Dr. Joseph W. Anderson, a Resident Member, was announced.

Mr. John F. Lewis read a paper on William Hogarth, illustrated with the lantern and original prints from his collection (see page 135).

1906.

JANUARY 4TH.

The meeting was held at the residence of John Story Jenks, Esq., 1937 Arch Street. The Treasurer's report was read and showed a balance in the Permanent Fund of \$773.82, and in the General Fund, \$16.84.

Mr. Jenks read a very entertaining paper, "An Account of Some Coins in a Private Collection," illustrated with many fine specimens from his cabinet (see page 141).

FEBRUARY 1ST, 1906.

The meeting was held at the residence of Joseph Wright, Esq., 2023 Walnut Street. Dr. Albert T. Clay gave a very interesting talk on "Administrative Archives of the Temple at Nippur during the Reign of the Cassites," illustrated with the lantern (see page 165).

By request of President Dana, Dr. Jastrow followed with some comments on the paper of the evening (see page 165).

MARCH 1ST, 1906.

The meeting was held at the residence of C. Howard Colket, Esq., 2008 DeLancey Street. Mr. Colket exhibited a Chinese bronze cash $5\frac{3}{8}$ inches in diameter; Mr. Langenheim presented the following: a 5-mark piece of Alfred of Saxe-Coburg-Gotha, 1895; a 2-mark piece of Bremen, 1904; a 2-mark piece of Lubeck, 1901; and two new half-mark pieces of the German Empire, all in silver. Dr. William Henry Furness, 3d, then gave a very interesting talk about the Island of Uap, one of the western Caroline Islands that he had visited recently, illustrating with the lantern and phonograph.

Dr. Furness said that the island of Uap is one of the Western Caroline group, about twenty miles long and ten miles wide. The only industries are the gathering of cocoanuts, fishing, and build-

ing. The cocoanut tree gives almost all needed, the fruit furnishing meat and also most of the drink (as the well water is brackish), and the fiber, clothes and rope. The natives as a business gather the nuts, from which the meat is taken, dried and shipped to Germany where the oil is extracted. Fishing is attended by almost religious observances; the men seclude themselves for some days before setting sail and on their return are met by the whole village. The boat is a canoe with outrigger and a curious custom is followed in sailing into the wind: for some reason the sail is kept always on one side and so tacking is impossible, when one course has been laid as long as convenient the mast is unstepped and moved to the other end of the boat, which now becomes the bow, the track resembling a switchback. This same peculiarity is the reason for two carved images of the frigate bird, one at each end; this bird is supposed to guard the seafarers, and its effigies are carefully covered as soon as land is reached, being exposed only while the boat is sailing. The remaining industry, building, was seen by many of the photographs Dr. Furness showed, the houses being built of heavy hewn timbers surmounted by rather steep roofs of bamboo lashed together with yards of fiber rope, the whole covered with a kind of thatch. There are two peculiarities in these houses; one is that they are built on a doubly terraced mound, this to keep it as dry as possible, and the other that there are specially built houses for the bachelors of each village, though some married men, but not their wives, live in them too.

Dr. Furness had taken a phonograph to Uap and reproduced some of the songs, such as are sung in appealing to the gods for fair weather, good voyages, and luck thereon. He said that hearing the phonograph talk and sing in English had no effect on the natives and they did not appear to think it wonderful, but when it repeated their own songs just sung they were awed by the curious thing that could learn their language so quickly.

One of the favorite games of all ages is an elaboration of our cat's cradle; with a piece of string Dr. Furness most skillfully made many of the figures; some are known as the sun's rays and the crab, from fanciful resemblance to these objects.

The inhabitants are divided into two castes, the freemen, probably the descendants of a conquering race, and an inferior, almost slave people, coming perhaps from the conquered. One of the duties of these latter is to dispose of the dead, no one of the higher caste will touch a dead person except his nearest relatives.

Dr. Furness illustrated his talk very fully with the lantern, showing besides the houses, inside and out, natives of both sexes and all ages; the men and children had nothing but a loin cloth, while the women wore a dress of leaves and grass completely covering them from the waist to the feet.

"The Stone Money of Uap," so interestingly described by Dr. Furness, is the subject of a monograph by him which appeared in the Transactions of the Department of Archæology of the University of Pennsylvania in Volume I, No. 1, 1904, and is well worth reading.

At the conclusion of his lecture Dr. Furness was given the thanks of the Society for his excellent, instructive, and attractive address.

APRIL 5TH, 1906.

The meeting was held at the residence of Eli Kirk Price, Esq., 1834 Spruce Street. Mr. Langenheim presented an interesting set of coins as follows: One half rupee, one quarter rupee, one half heller, two 2-pfennig pieces, new design, 1905; all the above except the last two, which are German Empire, being the new issue of the coins of the German-South African possessions, 1904-1905. The death of Clarence H. Clark, a resident member, was announced. Mr. Clark was closely identified with the promotion of art and literature, and the historiographer of the Society was requested to prepare a suitable memorial to be presented at a later date.

Mr. Charles H. Cramp presented an exceedingly valuable paper entitled, "Sixty Years of Shipbuilding on the Delaware." At its conclusion a discussion was participated in by President Dana, Mr. Cramp and other members of the Society, bearing upon the subject treated in the paper presented (see page 175).

MAY 3D, 1906.

The meeting was held at the residence of Richard W. Davids, Merion, Penna. Mr. Cohen read a letter from the Numismatic and Antiquarian Society of Montreal, accompanying a bronze medal commemorating the bi-centennial of the Chateau de Ramezay; he also read an interesting account of the Chateau. Mr. Cohen presented a bronze medal commemorating the two hundred and fiftieth anniversary of the arrival of a small company of

Jews in New York in 1655. He read a short account of the event and also of Isidore Kōnti, the engraver of the dies. The Hebrew inscription is as follows: "Freedom is born of Heaven; Righteousness and Justice are the habitation of her throne."

Mr. Davids read a paper on "Old Pewter and Its Marks," illustrated with some pieces (see page 189).

There was also shown an engraved platter with a horseman and "Frider;" apparently of German make, the mark almost undecipherable, but containing the letters ENGLISTIN and EVTVIN; a plate engraved 1739 with marks HARD METAL above and below the Princess feather, crowned X, JOHN star CARR and FROM LONDON; and a gun metal spoon mould; all lent by Israel W. Morris, Esq.

There were also exhibited a tankard and porringer, brought by T. H. B. Jacobs, Esq. (a guest), the latter with the usual flat handle, but pierced by a single hole about three-quarters of an inch in diameter. This was believed to be one of those with which each child was required to be provided while attending Westtown Boarding School. Mr. Townsend exhibited two plates marked with an eagle in a circle of stars, and BARNES PHILADA.; also a plate by Townsend & Co., of London; also a porringer with open work handle but no maker's mark. Mr. Hamilton exhibited a large pitcher with hinged lid and a strainer inside the lid, also a tankard with hinged lid, both said to be about one hundred and fifty years old, both having had the "Constitution" engraved on them at a later date.

NOVEMBER 1ST, 1906.

The meeting was held at the residence of Francis Jordan, Jr., Esq., 2228 Spruce Street. Mr. Cohen presented, as Corresponding Secretary, a communication from The American Free Art League, and Mr. Hart moved that the Secretary be directed to put on record our Society's approval of the objects of the League, and to communicate to the proper officer of the League our hearty sympathy with their efforts to remove the tariff from works of art imported into this country. Carried.

Mr. Morris exhibited a clasp bought at Tangiers that had come from the Atlas Mountains. Mr. Edwin AtLee Barber then read a paper on "Ceramic Forgeries," and exhibited specimens (see page 195).

DECEMBER 6TH, 1906.

The meeting was held at the residence of John W. Townsend, Esq., 2103 Walnut Street. The Corresponding Secretary announced the receipt of a volume from Julius Meili, of Zurich, Switzerland, a publication by him on Brazilian coins printed and illustrated in most attractive form.

The election of officers and members of committees for the following year was then held. The list is given on page 7.

Mr. Morris exhibited a gold ornament purchased in Gibraltar in 1906. This was made at Cordova, which at one time was celebrated for its gold and silver filigree work. The art seems to have been lost, for while the work is still executed it is no longer an important trade of the city. The ornament, consisting principally of a crown over a receptacle in the shape of a heart was probably made for a Roman Catholic reliquary, but for one hundred years it was in a Jewish family in Gibraltar, having been given by a Jewish godfather to his godchild at the time of circumcision when no doubt the Hebrew character Shaddai, meaning the "Almighty" was engraved upon both sides of the heart."

Prof. Dana then read a very interesting paper, "Notes on the American Flag and Some Others," illustrated with colored drawings by the author (see page 207).

In connection with the early history of the American flag, Mr. John W. Townsend exhibited a china plate, one of a set brought from China about one hundred years ago by Mrs. Townsend's grandfather, Captain Sharpe of Philadelphia, who sailed his own ship in the China trade early in the nineteenth century.

On one of his visits he is said to have ordered a set of china, ornamented to gratify his patriotic sentiments; the decoration is supposed to be the result of an inspection by the Chinese manufacturer of the flags and emblems of the ship whilst lying in a Chinese port.



Chinese Plate Exhibited by Mr. John W. Townsend.

THE EXPRESSION OF VALUE ON SOME COINS.

BY RICHARD W. DAVIDS.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
April 7th, 1904.)*

This title is not entirely satisfactory, but there seems to be no way to express the meaning concisely and at the same time clearly. The idea of the present paper is to discuss the various modes in which the face value or purchasing power at the time of emission is expressed on coins in distinction from the extrinsic worth or, it may be said, accidental value due to rarity, age, design, association or condition—that is, the numismatic price.

Preliminary to this subject a few words may be said of barter and the use of uncoined precious and indeed other metals in trade. Barter, as is well known, is trading by exchanging one commodity for another; this was the earliest mode of commerce and exists to-day among uncivilized and even primitive people, although in the latter case it is generally effected through an intermediate valuation in money.

Returning to antiquity, the next step was to use as the medium of exchange, cattle, and it is astonishing how many of the world's words for money are derived from roots having reference to the standard of wealth of the farmer—that is, his flocks and herds; such are “pecuniary,” “fee,” “rupee,” etc.

Next came pieces of metal, not yet coins, passing by weight only but gradually assuming a specified heaviness, at first either with or without marks of the maker, and then with the stamp of a government, more or less crude, forming what we know to-day as a coin and passing strictly by tale. The subject under discussion may be divided into parts depending on the manner of expression, and in a somewhat Milesian way the first to be treated includes those coins in which there is no value indicated except by size, metal or devices not so used in themselves. It is believed it is safe to say the great majority of coins belong to this division; such are nearly all the coins known as Greek, most of those of Rome, and so on down to almost the

present day, England even now having no mention of worth on her gold and some of her silver; also our own gold until 1807, our earliest quarter dollars, dimes and half dimes. In general, it may be said that the early money of all nations belongs to this division. Next we may take the case where the value is expressed pictorially. This part of the subject is open to criticism; the only example that suggests itself, and it cannot be cited with positiveness, is that large plate, almost ingot, of copper formerly in the Pembroke collection, measuring, it is believed, some four by six and a half inches and weighing over four and three-quarters pounds Troy. This has the figure of an ox, and was of the value of five asses, or pieces of bronze; whether this was the value of an ox seems to be only a matter of conjecture and not proven. Should this theory be correct it would make the piece, if struck, or rather cast, by authority, an early example of a coin with an expression of value, and that shown by the earliest form of written language, the picture.

The above is not to be taken as a suggestion that many seemingly similar devices have a like meaning, as, for instance, those on the coins of Corinth and Athens, which gave rise to the common names of "colts" and "owls;" those names were used merely as nicknames, as we to-day use "nickels."

The next division is where the number of units is given but the name of the unit itself omitted. Among such were the round cast bronze coins of about 300 B. C., weighing nearly a pound Troy and having the Janus head and prow of a ship, undoubtedly true examples because of the vertical line, which can be nothing else than I—that is, the Roman numeral one—it being understood that they are pieces of one asse.

The divisions of this coin had their value shown by pellets, their number indicating the unciae, this being the twelfth part of the larger unit. A curious survival of the use of pellets is seen on a twopence of Elizabeth, 1590, where there are two, showing value, also on a twenty-copeck piece of Catherine II. of Russia, 1762, where there are twenty dots, but in this case accompanied by 20.

In the Roman family coins we have the "X," denoting ten asses, the denarius both in silver and bronze. This mode of expression has been a favorite one, being used as "XII" and "VI" on shillings and sixpences; "3" and "1" on threepences and pennies; on the lozenge-shaped siege pieces of Charles I.; on

the New England and Pine Tree coins of Massachusetts; on one of the issues of our five-cent pieces of 1883, since changed; and on our nickel three-cent pieces, with "III."

Two pieces are worthy of mention: A gold crown of Charles I. of England has "V," one of the few English gold coins with an expression of value the writer has found; the other is a half crown of the Commonwealth with "II VI," meaning two shillings and six pence.

It will probably be best to take for our next division the case where the value is given in words in full or abbreviated. An early example of this is the Roman semisse, or half asse, with "Σ;" another, a coin of Judæa with "Shekel Israel" in Hebrew; other examples are quinarii, in the Roman family series, with "Q." Coming down to later times we find the words "Grossi," "Duplex" and "Denier."

In modern times we have coins with "Five Shillings Dollar" and "Ten Pence Irish" in full, both tokens, also "Six Livres" and "Une Decime." Indeed, putting values in words became quite common about one hundred years ago, and most of our own later coins belong to this class. The commemorative and money-making "Lafayette Dollar," "Columbian Half Dollar" and so called "Isabella Quarter Dollar," with "Columbian Quar. Dol.," are perhaps worthy of mention.

A subdivision of this class is where the number of units is given in figures and the unit in words or their abbreviations. There appear to be no early examples. There can be cited a penny of the Earl of Derby for the Isle of Man, of 1733, with "I D," and a piece of "16 Schil" of Charles VI. of Germany, 1731; English tokens follow with "3 shill," "1s 6d," and "XXX Pence Irish." The pennies and half pennies of Guernsey have the survival of an old unit bearing "8 and "4 Doubles."

A curious piece is a one stiver in bar money of Java, issued by Holland in 1805, on which nothing appears but "1s" and on the reverse the date. This has become such a common mode of expression that it is hardly worth while to give the other examples, except to mention that some of our silver for many years had "5, "10, "25 and "50 cents."

Expressing value as a fraction of a large unit has also been used. This has been done in two ways, either by showing how many of the coins make one of the larger denomination, or as a vulgar fraction; what are believed to be early and curious

examples of the former are a quarter of a crown of Charles X., Cardinal Bourbon, 1590, with "II II," and a half quarter of the same unit of Henry IV., twenty years later, with "VIII." Examples with actual fractions are a gold piece of Leopold I. of Germany, 1690, with "1-12" but no mention of the unit; the German 2-3 thaler, of about the same time and later, often bearing no mark of value except "2-3," meaning that part of a thaler. Another example is the plate money of Frederic of Sweden, 1723, one having " $\frac{1}{2}$ Daler Silf Munt" thereon; this is a somewhat curious example of a copper coin bearing its value in silver standard. The pennies of Jersey have on the earliest issues "1-13 of a shilling" and on the later "one twelfth of a shilling." There seem to be no coins which have for a value indication the weight alone of the metal, unless a piece (and there are other similar) of Joseph II. of Austria, with a view of Nuremberg, 1765, with "X Eine feine marck," can be considered to mean one tenth of a mark's weight of fine silver; but we find this in many cases in combination with the value, although this may mean the weight of the fine silver and not always of the whole coin.

A piece of Frederick Augustus, Elector of Saxony in 1764, has "CLX eine feine marck" and "12 einen thaler," meaning, no doubt, that one hundred and sixty were made from a mark's weight of fine silver, and that twelve of the pieces made a thaler; another of the same electorate of 1832 has "160;" a "4-groschen" piece of Frederick William II., 1797, has, in addition to the value, "84 ex marca pura colon," meaning that it had one eighty-fourth of a mark of pure silver. Other German coins of about 1840 have "ein thaler, XIV Eine F. M." and "VI einen Thaler LXXXIV Eine F. M."

A rouble of Nicholas I. of Russia, 1844, has besides the value "4 zolotniks 21 dola (units of weight) pure silver," and on the edge an inscription which appears to give the percentage of silver and total weight of the coin.

The Spanish coppers of the Republic of 1870 have, besides the value in centavos, the weight in grammes and the number in a kilogram. In this case the idea is not so much to show how much copper is in the pieces as to accustom the people to the metric system.

Our trade dollar is another example of the class; besides the value in full it bears "420 grs. 900 fine."

A somewhat similar mode of expression was to give the value

in terms of two units, that is one in terms of another, such as the two-thirds thaler of George III. for the Electoral Dominions, which, besides showing the fraction, added "24 Marien grosch." Also the "One-Dollar Piece" for Sierra Leone, 1791, which has "100" for one hundred cents. A Swiss piece of Canton Luzern, 1811, has "1 Batzen X Rappen."

The two-shilling pieces of Victoria, from the "Godless Florin" of 1849 to the end of the reign, belong to this class, having "one florin one tenth of a pound.' There have been two examples of this in our own coinage, the early dollars and halves having the only indication of value on the edge—"Hundred cents one dollar or unit," and "fifty cents or half a dollar"—and also the early cents and half cents, which bore not only the value in words and "1-100" and "1-200," but some also on the edge "one" and "two hundred for a dollar."

One more mode of expression is the bilingual value, examples of which are the rupees struck for India, Hong Kong and other colonies.

SOME HINDOO MARRIAGE CEREMONIES.

BY BENJAMIN SMITH LYMAN.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
May 5th, 1904.)*

(ABSTRACT.)

The communication on certain yet existing antique Hindoo marriage customs was made up of excerpts from an essay introductory to an unpublished treatise written at Mr. Lyman's request some thirty years ago by the highly accomplished Pundit Prema Chandra Chaudhuri, of Calcutta.

The Hindoos have so sanctified marriage as to regard it an indispensable preliminary to the other religious duties of mature life, and their religion, ancient laws and social customs all give the utmost importance to marriage. Far from being optional or a mere civil contract, it is considered an inevitable and sacred obligation to be incurred by every one, however poor, with the help, if need be, of neighbors and friends, if he would avoid unhappiness and ignominy in this world and the next. Among the constantly recurring festivals of the millions of Hindoo deities, certain days and months are particularly sacred to Prajápati, the divinity of marriages, as times best suited for nuptial ceremonies; though in certain cases a marriage is allowed on any day. Several pretended astrological and other arts of divination are also usually resorted to for ascertaining the favorable moment for a marriage.

Marriages are the leading Hindoo festivals and are celebrated with a profusion of expense in gorgeous pomp, illuminations, fireworks, music and Oriental pageantry, yet mostly in mere counterfeit imitation of the more substantial display of princes. It is, indeed, nowadays, the princely style of marriage that is generally copied, and not in the simple, pure form prescribed by the ancient sages. One marriage at Calcutta cost \$500,000, and two in one family cost \$50,000 each; and an outlay of several thousand dollars is not uncommon. The publicity effects practically a

ratification of the marriage by all in any way concerned; for, in case any flaw is discovered, the match must be broken, notwithstanding the preparations.

Most conspicuous are the antenuptial public processions of the bride or bridegroom, or both, and their friends, wildly chanting epithalamiums; the bride, for instance, to be bathed in the neighboring river, or in cities the sacred water to be fetched for the purpose from a pool. These women's ceremonies are not prescribed by the Shastras, yet are permitted as felicitous. There are also musical and dancing entertainments, and gifts and charities are generously distributed among relatives, friends, the neighboring poor, and the priesthood. The bridegroom's processions to bachelor feasts are equally conspicuous in the country, but in the city a coach and four are used, except at the time of marriage. The significance of the lavish display is often taken for mere womanish practice, senseless show, and auspicious ceremonies; but in reality the songs appear to be prayers for a happy union, the movement of the pair through the streets to be for propitiation of the divinities all round the village, and the gifts and charities to be for securing man's benediction on the marriage.

A stranger in Calcutta easily observes the torchlight procession of a bridegroom to his marriage and its feast at the bride's house, and must be greatly impressed by the gay splendor, but will be astonished at seeing the brilliant procession, when near the house, rudely attacked by a number of young men and boys of the neighborhood, and in country villages with especially rough violence. At the climax of the horseplay, when the bridegroom and his friends are about to withdraw in dudgeon, the master of the bride's house comes out with his friends, chides his neighbors, and entreats the offended ones to be appeased, who, after long altercations and perhaps some concessions obtained, may be persuaded to enter. The rabble of pelters and other demanders of fees come forward and insist on remuneration from the master of the house, and often cannot be dispersed without some guaranty of satisfaction. The bridegroom, alighting at the gate, undergoes a test before gaining entrance. He must break a dried betel-nut kernel that the bride has kept in her mouth all day. Neither his fingers, nor his fist, nor the golden or silver nut-crackers he has for some days been carrying can make the kernel yield; but finally his waiting-man steps forward and cuts it in two with his steel crackers. The ordeal

is merely traditional and of female origin, not in the Shastras, and is explained by the matrons as enigmatic and symbolical: that no caressing with the hand nor allurements of gold or silver can subdue a hardhearted woman so successfully as steellike hardihood.

Then the master of the house, the father or guardian of the bride, should advance a little way with his friends and relatives to welcome the guests, the bridegroom's party. Delegation of the duty to dependents by the aged host is considered an insult, and either drives the guests homeward, with or without the bridegroom, or impels them to push on with overwhelming numbers and another violent scuffle ensues. If the bridegroom should withdraw, it is easy for him to find another bride for that very night, but too hard for the bride to find another bridegroom for the predetermined auspicious hour, which can never be allowed to slip away, whether the party chosen be worthy or not. Such a failure is sure to give rise to scandalous rumors as to caste or character, and to result in indelible disgrace, and perhaps prevent any future match. The girl especially suffers in such a case; for the present conventional laws of the country absolutely forbid her remaining long unmarried; though in the time of Manu she might continue a spinster for life. To avoid such a disgrace her guardians submit to every humiliation, and offer bribes to persuade the offended party to return, who therefore grow the more insolent and increase their demands, or even proceed to violence. The host endures it all patiently, until the bride is disposed of, and then he tries to take his revenge by turning the guests away without the expected feast. At length, after the two parties are reconciled, they take seats in the carpeted and canopied courtyard of the great house built around a quadrangle, the bridegroom sitting upon a rich throne. The boys of both parties beset him with riddles and rebuses for his solution, and he endeavors by a prudent silence and scant nods and smiles to appear as wise as he possibly can. The elder, more respected men sit together in rows, with their white robes and hoary heads, smoking their hubble-bubble pipes and chatting on various subjects, but bawling aloud in rivalry for distinction in the distribution of the flower wreaths and sandalwood paste that presently are ceremoniously offered to each. On another side, the Brahmans and Pundits clamorously discuss questions of the marriage ceremonial or of the auspicious nuptial

moment, but are interrupted by the vociferation of a crowd of professional genealogists, soon followed by a number of eulogists chanting benedictions on the happy union. Then tumultuous groups of young men forcibly enter and loudly demand perquisites of various kinds; and finally the hubbub is drowned by a flourish of trumpets and deafening drums, sending the bridegroom to the solemn ceremonies.

The assemblage then removes to the upper hall, which is far better furnished and decorated than the lower one, and are seated there to await comfortably the end of the nuptials. Those who remain below can see the Brahmanical ceremonies carried out in the adjoining apartment. The bridegroom is there stripped of his princely attire and clad in red silken vests to undergo the sacred ceremony. Then is brought the bride, decorated with jewels and wreaths of flowers and all covered and veiled in silk and purple, to be made over to the bridegroom before the sacred fire burning on the altar and in the presence of the assembled witnesses. The officiating priests of both sides now hold full sway, and with their recital of holy texts and prolonged services tire out the patience of the hungry visitors, and make them withdraw to look after the preparations for the expected feast. At the end of the Brahmanical ceremonies, the married couple is led into an inner room, to be initiated into another kind of ceremony at the hand of the females of the Zanana, assisted by women of the neighborhood, united to attest the wedlock. Here strangers, and even the male members of the family, are not admitted during the marriage night and the next morning, when another kind of ceremony is performed by the females.

The meaning of the ceremonies and the nature of the secret practices of the Zanana and the whole system of Hindoo marriage naturally arouse the liveliest curiosity in a stranger. It will appear, however, that the present system is complicated, a mixture, partly of Aryan, partly of non-Aryan origin, with an addition of customs derived from former Moslem rulers and from the European settlers of to-day. The dancing, singing, pageantry, and processions are adopted from the Mahometans, who call the bridegroom the newly made prince, and treat him accordingly. The outside disputes and quarrels are remnants of the ancient barbarous custom of marriage by capture. The outer Brahmanical priestly ceremonies are purely Aryan, and the inner ceremonies carried out by the women are wholly aboriginal, or

non-Aryan, preserved among women alone by tradition, and not described in the Shastras, though countenanced there as practices in popular use. Some of the ceremonies strikingly resemble the nuptial rites of the ancient Romans and other peoples; for example, the illumination of the house and its adornment with wreaths of flowers resemble what Lucan (II, 354) describes; the covering and veil of the bride is exactly the Roman *connubium*, and allied to the ancient Jewish custom of veiling brides. The word nuptials, from *nuptiæ*, comes from this ceremony, which originated in consulting the girl's modesty on this delicate occasion. The covering is styled in India the veil of modesty, and is yellow, like the *flammeum* of the Romans. The banquet at the end of the ceremonies is exactly the Roman *confarreatio*, and the repast of the guests resembles the *reposita* of the ancients. Thereafter, the young married man is left with his bride in the Zanana, to pass the sleepless night in an endless variety of female rites and pleasantries which will be described elsewhere.

SWORDS AND SWORDSMANSHIP.

BY CHARLES E. DANA.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
January 5th, 1905.)*

"Do not draw me without cause,
Do not sheathe me without honor."

Motto on the Toledo Blade.

Steel has ceased to be a gentleman and has become a mechanic. "The steel of old, the steel of the noble and the brave, the steel of legend and of the story, the steel of the paladin and the chevalier, the steel of honor and of might, the steel that was above price, that knew not money and cared nought for profit—that steel is no more" (*Blackwood's*, May, 1881), and its successor has become—rails and other ignoble things.

Ermine was the badge of royalty to which few indeed could attain. The spur was the badge of knighthood which, too, was only for the elect. But the sword, while the mark of a gentleman, stood for freedom and courage. To be disarmed meant defeat, bondage: to allow the sword broken meant disgrace. The sacred sword was placed reverently on the altar, and an all-night vigil of prayer kept by the novitiate kneeling before it; while a touch of ceremony on the shoulder with it next morn made him, too, a Sir Knight.

While the sword reigned supreme, let us say, beginning with the year 1500 and extending through the days of the Grande Monarque, after which time that enemy to chivalry (and to tyranny), the gun, pushed the noble weapon to one side: during all that time fighting was individual; but the gun made it collective.

It is of the sword as a never-absent companion that this slight sketch treats, a companion and defender of life and honor, which the bearer needed to know intimately: a companion in a deft hand deadly in attack, better far than a buckler for defense; a companion on whom, if the owner was rich, was lavished all the skill of the swordsmith, all the art of a Cellini.

"The sword performed a moral function and exercised a social action. It was not a mere swaggerer, a mere despot, or a mere killer; it forced men to respect each other, and since the downfall of the sword the notion and the practice of deference and of manners between man and man have palpably diminished. While hectoring and violence have decreased on the one hand, punctiliousness, courtesy, dignity, and fair name have still more ebbed away on the other; for the sword, with all its faults, was a gallant gentleman." (*Blackwood's*, May, 1881.)

The evolution of the sword, roughly, is as follows:

First, the sword of knightly days, an armor-smasher, rough and brutal, almost devoid of skill.

Second, the two-hander, rough and brutal also, but with it came an incipient school of fence. Deadly enough when wielded by sturdy Swiss or German; the weapon of Granson, of Morat.

Third, the rapier, deadly, vicious, elegant, fantastic, true offspring of the Renaissance.

Fourth, the walking-sword, stately, elegant, courtly, like a minuet, whose light, easily handled blade developed the brilliant play of the modern school of fence, which to-day, when no longer essential, has almost reached perfection.

The one thing that never came, though ever sought for, was that philosophers' stone of the swordsman—the *universal parry*.

First of all swords is, of course, *Excalibur*, meaning "drawn from the stone." The great Uter Pendragon was dead, "so, in the greatest church of London . . . when matins and the first mass was done, there was seen in the churchyard a great stone, and in the midst thereof was an anvil of steel, a foot in height, and therein stuck a fair sword, naked, by the point, and letters of gold were written about: 'Whoso pulleth out this sword of this stone and anvil is rightwise king born of England' . . . 'Now assay,' said Sir Ector to Sir Kaye. And anon he pulled at the sword with all his might but it would not be. 'Now shall ye assay,' said Sir Ector to Arthur. 'With good will,' said Arthur, and pulled it out easily." (*History of King Arthur*, Mallory, pp. 6, 7.)

Next is *Joyeuse*. What says the "Song of Roland?" The Emperor Charlemagne "girds on *Joyeuse* . . . never was there its like, thirty times a day it changes its light. Much might we tell you of the Spear with which Our Lord was pierced upon the Cross: Charles has the point thereof, thanks be to God, and has

encased it in the golden hilt of his sword: for this honor and excellence it has been called *Joyeuse*" (p. 91). The pommel served as a seal, and Charles, when he used it to put his stamp on treaties, said, "I sign them with this end and with the other will I see that they are kept."

The origin and history of Roland's sword, *Durendal*, are variously given in the *chansons de geste*. Several of the accounts agree in making it the work of that forger of many weapons of medieval romance, Wayland, the Smith. Wayland was the invisible smith who haunted the Vale of the White Horse, in Berkshire. His favorite spot was near an old stone monument said to have been built by the Druids. If a horse cast a shoe he was taken there, tied to a certain stone, a piece of money (silver groat) was placed upon the stone, the owner retired for a reasonable time, and when he came back the horse was skillfully shod, the money was gone; but, alas, the horse from that day to this has always said nay to any attempt to find out who and what Wayland was.

To return to Roland. The scene is laid in the fatal Vale of Roncevaux. Roland has blown his horn, Charles has heard it. Though "he [Roland] feels that his time is spent he would not that *Durendal* should fall into the hands of the paynims: 'Lord God our Father, let not this shame fall upon France' . . . And again Roland smote upon the brown stone and beyond all telling shattered it: the sword grates, but springs back again into the air and is neither dented nor broken. And when the Count sees he may in no wise break it, he laments, saying, 'O *Durendal*, how fair and holy a thing thou art! In thy golden hilt is many a relic—a tooth of St. Peter, and some of the blood of St. Basil and hairs from the head of my lord Saint Denis, and a bit of the raiment of the Virgin Mary. It is not meet that thou fall into the hands of the paynims. . . . Now Roland feels that death has come upon him and that it creeps down from his head to his heart. In all haste he fares under a pine tree, and hath cast himself down upon his face on the green grass. Under him he laid his sword and his horn of ivory"—and there Charles found them. (*Song of Roland*, p. 86.)

Wayland, Ansias, Galas, Munifican, and other celebrated sword-smiths, seem, for some unknown reason, to have considered three years the proper time for forging a blade. After all this labor along came Oliver, bearing his sword, *Glorious*, and with a

want of tact which one would suppose must have cost him dear proceeded to cut off all the other swords one foot from the pommel, *Glorious*, as a matter of course, remaining scatheless. *Excalibur* seems to have escaped this harsh treatment, for Richard Cœur de Lion presented that much-famed blade to King Tancred of Sicily. By what ingenious method Richard recovered *Excalibur* from the lake is not mentioned. Of course you remember that just as Arthur was about to breathe his last "he threw the sword into the water as far as he might, and there came an arm and a hand above the water, and met it and caught it, and so shook it trice and brandished. And then the hand vanished away with the sword in the water." (*Hist. of Arthur*, p. 313.) To anyone familiar with the old chroniclers and their extreme reliability, this generous act of Richard's, incidentally, proves beyond a doubt that Arthur reigned in England and that the "Round Table" is no myth, despite the efforts of certain prejudiced historians to prove the contrary.

And now let us leave legend behind us and come down to the Age of Chivalry, quite as romantic and less difficult to study. During the *entr'acte* let us refresh our memory on the different parts of the sword.

The ordinary straight, two-edged, pointed blade is divided into two parts, the *forte* and the *faible*, the former near the hand where you can control the blade, the latter near the point where your control is but slight. The *right edge*, the only one on a curved blade, a sabre, is the edge towards your adversary when on guard; the *false edge* is on the other side, is found only on straight blades, and is very difficult to use. The *tang* is a bar of wrought iron welded to the blade; it passes through the guard, hilt or handle, and through the *pommel* (little apple), a ball or small disk, to which it is firmly riveted. The *quillons* are the right angle projecting pieces between the grip and the blade, forming the simplest and earliest guard, the "cross-handled sword" before which, stuck upright in the sand, the Crusader performed his orisons. The *quillons* may be straight or curved in various ways, or be at an angle of, say, forty-five degrees with the blade. This simple guard was sufficient so long as steel gauntlets were worn and armor-smashing was the end in view. But when *foyning*, or thrusting, came into use, the manner of holding the sword changed, the thumb, straightened, was pressed against the blade, and the first finger, occasionally even the second, was bent

over the *quillon*; this necessitated an additional guard, the *false guard*. Between the false guard and the *quillons* the rapier blade is narrowed and squared to give a better grip to the forefinger; this is called the *ricasso*. The simplest false guard was formed of two loops of metal, one on either side of the blade, and was called the *pas d'âne* (step of the ass), because of its resemblance to a sort of gag of that name used to keep the mouth of a horse open when being examined. The *knuckle-bow* is a curved bar from the *quillons* protecting the knuckles and back of the hand, as on the modern saber. These guards are elaborated into all sorts of graceful forms in the Italian or French rapier. The Spanish rapier, beside the straight *quillons*, has only a bell-guard with the knuckle-bow, the simplest and best for a thrusting sword. This bell alone is universally used on the modern French and Italian dueling swords.

To-day the sword "is but a bastard of the kin; it is a vulgar article of commerce, like skewers or chisels or nails, supplied by contract from Liège, or St. Etienne, from Solingen or Birmingham." (*Blackwood's*, May, 1881.) But in the days we are lingering in the swordsmith's craft was a handicraft, an art, requiring a very high degree of skill. His rough material was a bar of cast and hammered steel, tapering from the center to the ends; when this was cut in two each half was made into a sword. The *tang*, good old Saxon word, was welded to its base; hammer and anvil work did all the rest. There were, of course, special tools for the grooves, for measuring, etc., but the shape and weight of the blade were fixed by the skilled hands of the smith.

Great care was required to avoid overheating the metal, as that would have produced a brittle, crystalline grain, and to keep the surface free from oxide, so injurious when hammered in. Tempering with oil was much easier, but water was preferred by the best makers. With oil there was less risk of the blade coming out distorted and having to be forged straight again, but an expert smith can generally avoid that. The steel in most modern swords is only surface-hardened, and therefore remains liable to bend. Last, follows grinding and polishing.

"To make steel sharp it must be hard: to make it elastic it must be tough. Cast steel gives hardness, shear steel gives toughness, but in no ordinary process can the two qualities be united. So, excepting at Toledo and one or two other places, all actual makers have abandoned the attempt to produce elastic

blades, and have gone in for edge alone. There is, however (or, more exactly, there was), a treatment which really did unite these two contrary capacities in the same blade. The curious product called damask steel possessed them both, and all the great Eastern swords owe to it their celebrity . . .

“All steel which exhibits a surface figured with lines is called damask, but the true Oriental product of that name united extraordinary interior qualities to this generic exterior aspect. It combined two distinct classes of merit. First, as regards its inner nature, it was so ductile and so malleable that it could be hammered cold; yet it became as hard as tyranny when tempered, and took an edge as sharp as the north wind, and, with all this was as supple as a whalebone, so that no accident could break it. Secondly, as regards its external appearance, it was covered with meandering lines like watermarks: its hue was gray, brown or black, and presented over all a varying sheen, blue, red or golden. The quality rose with the size, the shape, and the clearness of the lines. In very high-class specimens they were an eighth of an inch thick; when they were only as wide as ordinary writing they were not regarded as really good; and if they were scarcely visible, they were altogether contemptible. Pattern was as important as size: straight parallel ribs constituted the lowest type; as the lines curved the merit rose; it went on increasing with the multiplicity of twists; it became admirable when ruptures of the marks appeared with dots between them; it was distinctly noble when the lines were so contorted and so broken that they formed a network of little threads, twisted in different directions; and it attained the highest perfection when those threads assumed the shape of chevrons or bunches of little grapes, spread equally all over the blade. If to these particularities of pattern a deep dark ground with a true golden gloss was superadded, then the work was a masterpiece and was worthy to have been made at Damascus.

“These definitions were laid down some thirty years ago by a man who followed out the art of damasking to its inmost mysteries—who made himself its apostle and preached its creed. This enthusiast—Colonel Anosoff, manager of the imperial (Russian) factory at Zlatöust in the Urals—succeeded in reproducing the true Oriental damask; at least he obtained steel of such striking character and of such beauty and merit, that it was not possible to detect any difference between it and the most

finished old Syrian performances. The lines which his work showed were in the metal itself and could not be ground out of it; his color and prismatic lustre were altogether perfect, and he frequently (but not always) united extreme hardness and extreme elasticity in the same specimen. He made some swords which would bend till the point touched the hilt and which would also cut through an iron bar. More than this no blade can do or ever has done; and the same two faculties have never before been conjoined in any other steel than damask. There are swords now made in Europe which will sweep a gauze in two in the air; and at Toledo every day blades may be seen packed in coils like watchsprings. But no metal can be persuaded to do both unless it be damasked—and not always even then.” (*Blackwood's*, May, 1881.)

A blade may be obtained for a high price in the bazaars of either Constantinople or Cairo, which the truthful Oriental merchant guarantees is the finest ancient Damascus. The peculiarity of this blade is that a slight rubbing with emery and oil removes all trace of the ancient markings, while on bending the blade, say to a right angle, it does not break but it retains that somewhat inconvenient form until straightened out by the use of the sole of the foot.

Our saber, now going out of fashion, comes, of course, from the curved scimitar of the Orient. We get it via Hungary, where it is the favorite weapon of the jaunty little light hussars. *Szablya*, they call it, whence our word saber.

Spanish steel has always been famous; the mines which produce the best metal were originally worked by the Romans and by the Goths. Those of Mondragon, in the Basque Provinces, are said to have furnished most of the steel used at Toledo. These blades were celebrated even in Roman times. Under Sultan Abd-ur-Rahmen II., in the ninth century, their fame became even greater.

At first every master, with his apprentices and laborers, worked at his own home. Subsequently they formed themselves into a powerful gild of European importance, *Los Armeros de Toledo*; the corporation was freed from taxes and payment of duties on all material to be used in their art. The best blades were made in the fourteenth, fifteenth, and sixteenth centuries. Many other Spanish cities turned out work almost equal to Toledo, but none ever rivaled it in name. Old writers, of course, ascribe

the excellence of the blade to the properties of the Tagus water and sand; they quote, to prove their case, that the dyes of the Gobelins, in Paris, have ever been unapproachable, and that they derive their excellence from the peculiar properties of the Bièvre, upon whose banks the manufactory is built. Unfortunately for the case in point, the water of the Bièvre is so filthy that it has not been used for a century. The real secret of the excellence of the Toledo blade was the armorer, his process, his careful selection of metal and the high standard maintained by the gild, all the work having to be carefully tested by officers of the gild before it could be sold. To-day the Tagus water is no longer used, as that from a well is more convenient and is found to be equally efficacious.

The most famous *espadero* (sword maker) was Giuliano el Moro, a native of Granada, as his name imports, who after the fall of the Moorish capital abandoned his religion; King Ferdinand stood sponsor at his baptism, for which reason the *espadero* is often spoken of as Giuliano el Rey. His mark, a little dog, is mentioned by Cervantes. Other great swordsmiths were: Johannes de la Hota, Tomas de Ayala, Sagahun, Dionisto Corrientes, whose motto was *opus laudat artificem* (the work praises the maker), Tomas Ghya, Hortensio de Aguerre, Manchacca Sebastian Hernandez, etc.

The *Fabrica* at Toledo is hardly worth a visit to-day, as it only dates from the time of Charles III., who died in 1788. Some 3,500 blades are produced there annually, of thoroughly good quality but no longer of any artistic merit.

The best collection of Toledo blades is in the Madrid *Armeria*. Others are in the Artillery Museum, the armories of the Dukes of Medinaceli, Alba, Fernan-Nunez and Osuna.

As our own *Proceedings* for 1890 contains an article on Japanese swords from the pen of Mr. Benjamin Smith Lyman, whose name is a guarantee for accuracy and thorough knowledge, I shall add only a few stray notes from that and other authorities.

The marvelous swords of Japan cannot compete with the Damascus blades because of their utter want of elasticity. They are as hard as diamonds, will take an edge so keen that if the blade is held upright in a stream of water the floating leaves which are gently wafted against the edge by the current are cut in two thereby! You can shave with one, you can cut a pillow or floating lace veil in two, while the same edge chops a bar of

iron in twain without a sign of a nick appearing. N. B.—Implicit faith in these Japanese details is not insisted upon.

In the very old times, 700 B. C. or before, the three gifts the gods gave to mortals were the sword, the mirror and the ball. "Until the end of the fifth century, Chinese and Corean blades were considered better than the local products, and it was only on the creation of the Ministry of War, in A. D. 645 (has any other land a War Office twelve centuries old?), that a government arms factory was established and a stimulus given to the trade. From that day it grew rapidly. The famous Yatsuma invented new processes of treating steel." (*Blackwood's.*) Mr. Lyman tells us that the four most famous sword makers seem to have been, Munechika (A. D. 900-1000), Yoshimitsu (about 1275), Masamune (about 1290), and Muramasa (about 1340). The most famous of these was Masamune and next to him, perhaps, Muramasa, one of his pupils.

The three best known forms of Japanese blades are: The *tsurgi*, the primeval form of sword, out of use for many centuries and now seldom seen. It is set up as an ornament in temples, is 28 to 40 inches long and two and a half to three inches wide, heavy, pointed and two-edged. The *katana* is a one-edged blade, 30 to 33 inches long, and is the sword that was commonly worn by the military class. The *tachi* is said to be longer, more slender, and more strongly curved than the *katana*, was used by generals as a sign of their rank, is now rare, and only seen as a curiosity or ornament. (Lyman.)

To many people, I think, the most interesting of all makers is Andrea Ferrara. His name has been given to the Scotch-Highland sword. It is a basket-hilted, double-edged broadsword which, it is said, was introduced into Scotland some time during the sixteenth century. The swords of to-day carried by the officers of the Highland regiments are almost identical in appearance with the Andrea Ferrara, the chief difference being that the modern blade is not double-edged.

Wendelin Boeheim, in his *Master Armourers from the Fourteenth to the Eighteenth Century*, has made a most careful investigation of the nationality of Andrea Ferrara. His summing up is as follows: "From all these combinations there results a chain of circumstantial evidence, closely approaching to demonstration, that Andrea Ferrara was born about the year 1555, that he was of a family of armourers which had existed in Italy for at least two

generations before that time, and of whom the first, like Giovanni da Bologna, Leonardo da Vinci, Paolo Veronese, and a crowd of medieval artists, derived his nomination from the place of his nativity, the ducal city of Ferrara."

As the truth will, in all probability, never be ascertained, let me repeat the well-known legend explaining Andrea's visit to Scotland, of which there is absolutely no proof. According to the story, he was a Spanish artist, and had an apprentice who was an excellent workman but too inquisitive. At a certain stage of the work Andrea always sent his apprentices away and closed the doors of his atelier. Something most important, all knew, was then done; after this mystery the apprentices were admitted and the work continued. The apprentice in question bored a hole through the door. Next time they were dismissed he glued his eye to the hole and saw Ferrara draw a heated blade from the fire; this he covered with a white powder; the powder was well hammered in, the blade returned and reheated. The process was repeated on the other side. This was the secret. But what was the powder? The apprentice was discovered; Ferrara struck him a blow with a hammer that proved fatal, and was forced to fly for safety to Scotland.

Before laughing at this tradition it is well to remember that in the manufacture of the Damascus scimitars, one of the operations for producing the finest blades (it is said) was to sprinkle the steel, while red hot, with diamond and ruby dust, and to hammer the powder into the metal. The chemical action of this mixture of the purest carbon and alumina and the finest silica cannot be gone into here, but it was probably derived from "that profound knowledge of chemistry of the Saracens. And although, as a British critic suggests, the Spanish artist should not have used diamond and ruby dust, he may have substituted the simpler elements of the same principles, carbon in the forge, and silica and alumina in the 'white powder' amalgamated on the anvil." (*Highland Dress*, p. 38.)

Before leaving the subject of Andrea Ferrara, on which I have already dwelt too long, let me recall to you the "Twickenham Sword Railing." This surrounded a flower-bed in the grounds of Twickenham House. It was formed of sword-blades set side by side, as closely as possible, driven by their tangs into a stout timber and thickly coated with green paint. There were three sections of these, containing in all 137 blades. The swords all

came from the battlefield of Culloden (1745). When cleaned, a large number of the blades bore the mark of Andrea Ferrara, others the "running-fox" and the older "wolf" marks of Passau, while some came from Solingen, but when Solingen chose it could produce weapons of the very finest class.

The Scotch claymore (meaning in Gaelic a "great-sword") is often said to be derived from a somewhat similar weapon used by the Venetian galley-slaves who, when the Republic was hard pressed, were sometimes employed as sailors. This is a mistake: the Venetian sword is called a *schiaivona*, not from slave or galley-slave, but from *Slav*, the Dalmatians, Montenegrins, etc. It was their national weapon, and many of these Slavonians were in the Venetian service. The *Riva dei Schiavoni* is the "Quay of the Slavs," where they unloaded their ships. These swords are often stamped with the winged lion of St. Mark, and one Andrea Ferrara blade at least was found in a *schiaivona*. On the other hand, it is stated on good authority that "the basket hilt of a round shape was in use in England in the reign of Henry VIII." (died 1547. *Highland Dress*, Lord Archibald Campbell, p. 45; see also p. 66).

Milan was famous for its armor and for swords also, *vide* Douglas and Percy at Otterbourne, 1388:

" . . . swordes, that wear of fyn myllan."

They were of the best, for they bore a splendid test:

"When Percy wit the Douglas met
I wat he was fu' fain! (glad)
Thy swakked their swords till sair they swat,
And the blood ran down like rain."

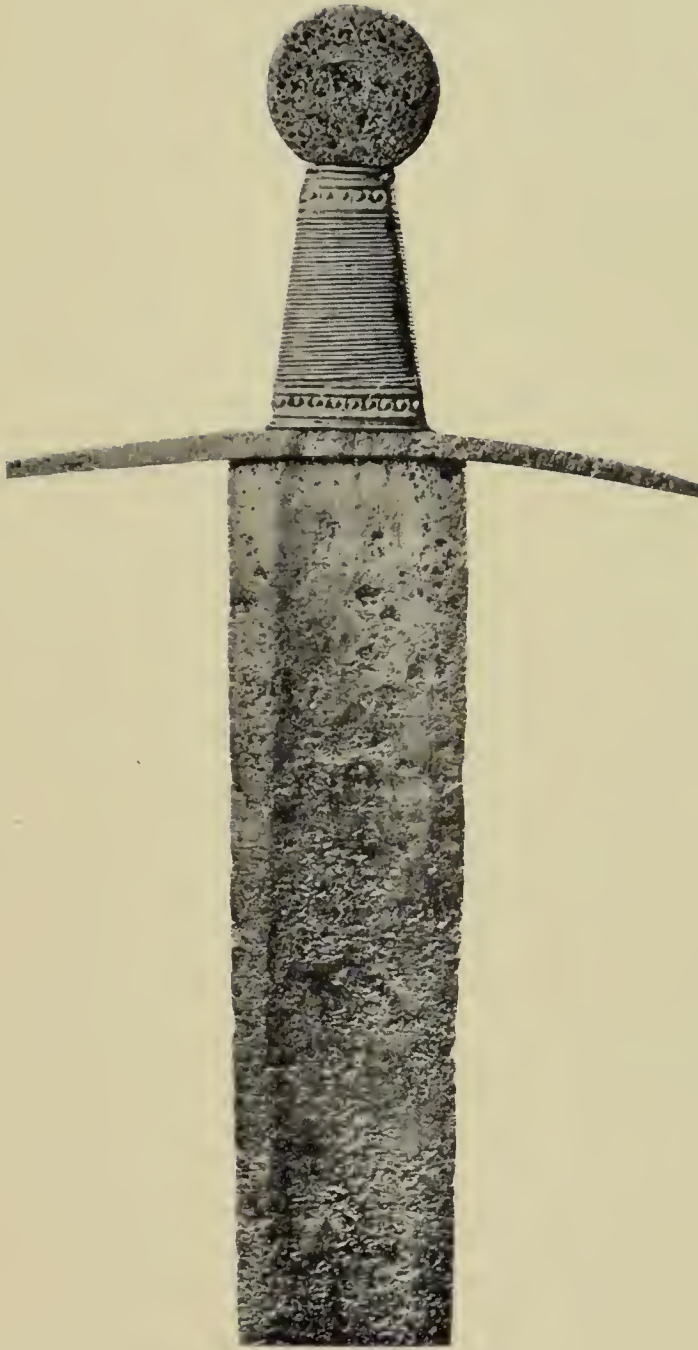
The Germans have ever ranked high in the manufacture of swords and all other arms. Cologne, Passau, Heilbron, were famous factories, but the first early took the lead. Arthur's *Joyeuse* was of "fyne Colleyne;" St. Louis, that somewhat quixotic Crusader, bore one on his disastrous campaign in Egypt, 1248. It is said that old Crusader blades may still be found, blades that have been treasured through the ages by some family of fighters, Arab or Soudanese. My own experience, however, was not reassuring in this respect. Many years ago on the desert, not far from Wady Halfa, in the days when the tourist was rare and solitude common, I met a very exaggerated Nubian warrior,

heavily armed, stalking the desert where no foe could possibly be. Knowing well the absolute guilelessness of these people, when the man of war handed me what he assured me was a blade that had been in his own family since the Crusades, but which, on account of family difficulties, he was forced to part with (at a price considerably greater than that of a Nubian warrior), I naturally received the blade in my hands with much reverence, drew it with awe, but returned it without either; the ancient Crusader-swordsmith, inadvertently, no doubt, had marked the blade, in modern letters, "Solingen."

The German make of sword held its own for a long time even in England, that land of fine cutlery. In 1786, a Mr. Gill, of Birmingham, competing with foreign and English makers for the contract to supply the East India Company, is said to have produced blades which were so keen and elastic that he could cut a gun-barrel asunder with one and then wind the same blade, ribbon-like, about the gun-barrel, after which the blade would spring back to its original straightness, except at the point. Mr. Gill's blades and story seem to excel in toughness even the "damask steel."

The modern English test for swords may not be uninteresting. The flat of the blade is caused to strike a violent blow on a solid block with each side, then with the edge, and lastly with the back. After this it is bent flatwise in both directions by hand, and finally the point is driven through a steel plate about an eighth of an inch thick. The failures amount to some forty per cent.

The usual sword in the so-called day of chivalry was of a not inconvenient length, say three feet from pommel to point. Whether knights ever really wore it in front, as so often represented on their effigies, or whether that was a picturesque vagary of the sculptor, is difficult to decide. The blade was double-edged, heavy, broad forte, tapering and pointed. In the very early specimens, say, before the ninth century, the *quillons* are often so short as to be almost useless as a guard; they were of course, perfectly straight, being the true "cross-handled" sword; the heavy pommel served as a balance. There were no parries, the only defense being getting out of the way, trusting to the strength of the armor, catching the blow on the shield, or possibly a counter attack. These incomprehensible creatures considered it a mark of esteem to invite a dear friend to a little deadly "discussion" with sword or axe, for the two weapons seem to have



Ninth Century.



Twelfth Century.

Musée d'Artillerie. Paris.

been looked upon as equally scientific. Until well into the thirteenth century no plate armor was worn, only mail, so that a well-directed blow with the heavy sword on an opponent's shoulder, while it might not cut through the mail, left that gentleman's skeleton in a badly damaged condition. Then shoulder plates were introduced, not unlike the shoulder knots of our officers.

The knight was the epitome of intolerance and brutality. To manage in the awkward way he did the lance, to wield the sword and battle-axe, was the sum and substance of his education, and to keep up his skill required constant practice. The great advantage of this hacking-school, as we might call it, was that the elders told the young squire the various chops, and when he had them well by heart they put him in front of a thick post, about six feet high, and let him whack, bang and cut at it, day after day, for many a month. When these first principles were well understood, he put on his armor and danced around the battered post as though it were an active foe. One can easily conceive to what end such a school would lead.

Fortunately there was another class. In England "the lad of dale and fell," the apprentice, the young burgher, took up the long-bow, and till the gentle Maid of Orleans broke the spell, no foe could approach them or face them. On the Continent it was otherwise. The burgher had walled-in his little city and stood ever ready to defend it; but more was needed—he must meet the ironclad monster in the open. Massive squares of big, stalwart young fellows, with lances 16 or 18 feet long, projecting porcupine-like, sustained the first shock; then, when those dread iron ranks were broken and in confusion, out sprang the halberdiers and the bearers of the *Zweihänder*. The first, an axelike weapon, smashed the armor and killed its contents. If the swordsman with his huge weapon could dodge the lance or guard the blow of axe or sword, one sweep of that blade of his added another distinguished name to the death roll of Granson or Morat, left desolate another castle in far off Burgundy.

But the hardy footman is unarmored; what can he do to make up for lack of it? He went to the juggler, to the wrestler, to the old veteran, and garnered in all they could tell him of the noble science of defense, or "fence." Such schools were very plebeian and the knight despised them; but as time passed, and armor with it (except as a theatrical property for clothing candidates for portraits), those who needed proficiency in arms found

it obligatory to go to these schools. With the disuse of armor the superiority of the point asserted itself, and from the cultivation of the point arose fencing proper.

Before drawing our sword let us take a look at the old *Fechtschulen*, premising that the real school of fence had its rise in Italy and that for long Italian masters stood undisputed first.

In the course of the fourteenth century some enterprising and redoubtable "fighting-masters" seem to have clubbed together and monopolized the right of teaching the art. They evidently succeeded in maintaining this monopoly, for anyone attempting to teach fencing in Germany was sooner or later confronted by the heads of the *Fechter-Gilde*, one captain and five masters, and offered the alternatives of fighting them in turn or altogether, with the certainty of being cut to pieces, or of entering the association under their rule.*

The oldest of these corporations, the *Buergerschaft von St. Marcus von Loewenberg*, the Fraternity of St. Mark, the *Marxbrueder*, had its headquarters at Frankfort-on-the-Main, forming there a kind of university where numerous aspiring swordsmen went to earn their degrees in arms. Those who wished to set up schools of their own went there during the autumn fairs and offered themselves as candidates for the *Bruederschaft*.

The ordeal of initiation was invested with a certain quaint solemnity. A scaffold was erected in the marketplace, and on this, in full view of a critical crowd, the applicant fought with a selected number of the masters. If he held his own he was given the *accolade* across the hips with the sword of state, upon the blade of which the novitiate placed two gold florins, the fee for his reception, after which he was entitled to learn all the various secrets of the sword (carefully guarded by the *Marxbrueder*), to wear their badge, a heraldic lion, and to teach the art of fence throughout Germany.

The privileges of the fraternity were recognized by letters patent issued by several Emperors: Frederick IV., father of Maximilian, at Nuremberg, in 1480; by Maximilian himself in

* So much of what follows is taken from that entertaining and exhaustive work, *Schools and Masters of Fence from the Middle Ages to the End of the Eighteenth Century*, by Egerton Castle, that I shall hereafter cease to give that authority.

1512 (and Max was no mean judge); Maximilian II., Augsburg, 1566, and Rudolph II., Prague, 1579. The great rival of the *Marxbrueder* was the *Federfechter*, who were the first to adopt the Italian school and make use of the point.

SWORD AND BUCKLER.

Go back as far as we may, we are sure to find these two weapons, for we shall see that the buckler, too, was a weapon as well as a defense. There is a MS. of the thirteenth century representing a combat of this nature, and while the sword is the club-like implement of that day, the buckler is similar to those of later times, a small, round shield held on the fist, not on the arm. When held on the arm, even a large buckler is no better than a dagger, for it must be held sideways in order not to interfere with the play of the sword.

These "swordsmen," as they were called, were either jugglers or "gladiators;" the latter, a thoroughly bad lot, were much in demand for teachers. The dens in which they taught were most dangerous places, with a reputation of the worst, for these adepts were suspected of making better use of their art than mere teaching; their rich patrons often had need of such experts to satisfy private vengeance. So obnoxious did they become that in 1286 a royal edict prohibited the keeping of schools of arms and forbade all loyal subjects to *eskirmer au bokeler*.

"Bluff King Hal" (Henry VIII., died 1547) was a devoted swordsman. Until his time the professional swordsmen remained in disfavor. Henry established the "Corporation of Masters of Defense," granting them the monopoly of teaching the art in England, with other enormous privileges, which very soon enabled the corporation to put down or absorb all the more ferocious swashbucklers and to become, in a moderate degree, respectable. The coat-of-arms granted them by the Heralds' Office was, "*gules* (a red shield), a sword pendant *argent* (silver)."

The bucklers or shields were from 12 to 24 inches in diameter. Sometimes a large spike projected from the middle for "foyning" or thrusting. In the time of Elizabeth (+1603) this spike was limited to two inches, and bucklers with longer ones were confiscated and hung up to decorate the London gates. Hooks for breaking sword-blades were common, also pistols, and for night-work a lantern in the middle of the buckler was not unusual.

London bucklers in the time of Queen Elizabeth acquired quite a reputation.

Marozzo gives twelve guards or positions of the sword for attack, which are known as *progressions*. The "engaging guard," with the left foot advanced, the shield extended out from the shoulder, the sword in quarte, is a true guard; so, too, is that with the right foot extended, the sword ready for striking or parrying. The head guard is a high tierce with the buckler extended; a number of the positions are with the hanging guard, as in the modern saber practice. There are six cuts, *mandritti* (right-hand), and several with the false edge, intended for the back of the neck, or of the left arm, or of the left ham, or the *coup de Jarnac*, of which more anon. The point was rarely used and then it was the face which was attacked, probably on account of the habit of wearing concealed mail, which rendered the body practically invulnerable.

Pupils under these old masters met only for practice; the lessons were given in private, the scholar being bound upon a cross-hilt "as it were God's Holy Cross, never to take part against the master and never to teach any other person without his permission the secrets he is about to impart."

THE TWO-HAND SWORD*

The *Zweihänder* is a German or Swiss weapon, not older than the fifteenth century. Huge swords were, before that time, carried occasionally by knights, but no doubt there was more or less pose in such displays of strength. The ponderous weapon of Conrad Schenk von Winterstetten, in the Dresden Museum, the total length of which is 8 feet 2 inches, width of blade 4 inches, pommel 4 inches in diameter, has on the blade the motto, in old German: "Conrad most worthy Schenk, remember me. Do not let Winterstetten the brave, leave one helm uncleft." These mottoes are interesting in their way: "Do not draw me

*Nearly every authority calls this weapon a "two-handed sword." I so strongly object to the expression that I submitted my reasons to a friend learned in grammar and other lore. Our conclusion is, that "two-handed sword" is in its nature incorrect but has become an idiomatic expression and is justified by usage. It is incorrect because the qualification is given to the wrong substantive, the sword, instead of to the person who wields it. "Two-hand sword" is, in my opinion, more logical and more elegant, for which reasons I shall continue, if permitted, to use it.



Two-hand Sword. The Engaging Guard. After Marozzo, Venice, A. D. 1536.

without reason. Do not sheathe me without honor," is on the Toledo blades. An old Ferrara blade sensibly remarks, "My value varies with the hand that holds me." Others are: "There is no conqueror but God," "Do not abandon me, O faithful God," "With the help of Allah I hope to kill my enemy," "When this viper stings there is no cure in any doctor's shop," "I come," "He that thinks not as I do thinks falsely," etc.

The *Zweihänder* was not unknown in France also. Jusserand gives the following: "The crowd assembled at Bayeux, in 1426, to see a public exhibition there, that is to say of the two-hand sword." Also: "Maitre Guillaume de Montroy teaches 'le jeu de l'épée à deux mains' in Paris, in 1450, at the Hôtel de la Pie, près St. Gervais." (*Les Sports*, p. 20.)

"The Swiss and Germans on the march, about 1500, placed the fifers and drummers at the head of the column. Next came the culverins and the culvriniers; after them the guard of halberdiers, their ranks reinforced here and there by 'joueurs d'épée' carrying the huge two-hand sword of the time." (*Costume en France*.)

The total length of the weapon was about 5 feet 6 inches. From the *quillons* to the end of the pommel was a little less than 18 inches. Down the blade, about a foot from the *quillons*, forming a crescent across it, are two lugs, like horns, curving toward the point: these are termed the "false-guard." That part of the blade (unsharpened) between this and the *quillons* was usually covered with leather; thus there was a space of nearly 2 feet 6 inches for the grip in case the swordsman wished to shorten his blade. All this is much like the quarter-staff. The right hand grasped the hilt close to the *quillons*, the left close to the pommel, and in some movements the pommel itself.

The chief requisites for the two-hander were great muscular strength, great activity and suppleness of the wrists. Marozzo (1536) gives quite a full account of the use of this weapon, so also does Jacob Sutor, Frankfort, 1612. On parade the sword was held by the left hand, like the old "carry arms" with the musket, only it was held on the left side. The salute is quite stately in the slow majesty of its movements. The right hand is brought across the chest grasping the hilt; the sword is carried opposite the face, then raised till the *quillons* are on a level with the mouth. Then the blade, always vertical, is brought to the right side, the right foot is moved backward some six inches,

and the blade is lowered till the point is about four inches from the ground; these movements are then repeated in reverse order, till the original position is recovered.

There are six cuts: two oblique downward, at the head and shoulders; two oblique upward; two horizontal. Those at the adversary's left side are called *mandritti*, and are given with the *right foot* advanced. Those against his right side are given with the *left foot* advanced and are called, *riversi*. All these have, of course, their parries. The *moulinets*, flourishes or wheels, are recommended for practice; they, like the foregoing, much resemble the quarter staff. These latter require a large free space and even then the danger of getting one's arms tangled up in the huge *quillons* is very real. The roughness of this swordplay may be imagined from one of Sutor's illustrations, where a fencer has thrown down his huge sword, is bending over, grasping his opponent behind the knees, to throw him on his back ere his blow can descend.

CASE OF RAPIERS.

Two swords with flat blades and only outside guards: these fitted together in one sheath and were much in vogue with English masters in the latter half of the sixteenth century. Except that, thus armed, an expert fencer had the choice of attack with either hand, it was much the same as sword and dagger.

So likewise the sword and cloak. The cloak was wrapped twice about the left forearm, leaving a part hanging loose; this last was, owing to its flexibility, deemed capable of stopping cuts and of sufficiently entangling the point as to be a protection against thrusts, provided the fencer kept his left leg, the one on the cloak side, back, for the cloak was no protection if it had a solid part behind it; cuts could be stopped if met on the forte. One peculiar use of the cloak was to throw it over your adversary's blade, completely paralyzing him for a second, giving you a chance to assassinate him most conveniently.

RAPIER

Its name was given in contempt, *raspière*, a rasper or poker, hence, "a poking-spit of Spaine" (Skeat). The French call the Spanish weapon *une rapière*, but the Italian or French rapier they call *une épée* or sword.

It will make what follows clearer if we glance at some of



"Case of Rapiers." Guard. After di Grassi, Venice, A. D. 1570.

the elementary principles of fencing. There are, in the abstract, eight guards:

Prime. High guard of upper body and face. Hand in pronation (finger nails *down*) on a level with the shoulder. Point low; a hanging guard now seldom used, as it is awkward, slow, difficult of recovery and has no riposte.

Seconde. Same position of nails; hand on a level with the hip; point slightly lowered; to guard right side of stomach and leg.

Tierce. Same position of nails and hand, point on a level with the eye; guards the right side.

Quarte. Guards the left side. Thumb upwards, hand to left, sword as in tierce.

Quinte. Guard for the left, otherwise like seconde. Quarte is much better.

Sixte. Hand to the right in supination (nails up), sword as in tierce.

Septime. Hand in supination, on a level with the shoulder, point low, as in prime, only this is the guard for the *left side*.

Octave. Hand in supination, guard for the left side, otherwise like seconde.

The principal guards, those most used, are: for the right, *sixte* or *tierce*, for the left, *quarte*. Remember that "supination" means finger nails up; "pronation," finger nails down.

The first principle of defense with or without weapons of any kind is: keep out of distance when on the defensive; within easy striking distance when on the attack. If with a sword, to hold the weapon in front of one so as to be able to deliver every possible attack and come to every possible parry with the least exertion and in the shortest time.

The ancient manner of holding the rapier was almost identical with the Italian guard as given by Rosaroll and Grisetti (book, Milan, 1803), whom many of the Southern Italian school look upon as authorities to-day. The right arm and sword extended in a horizontal line, hand in pronation (nails down), first finger bent over the *quillon*, thumb against the blade. The left hand extended horizontally forward, to be used in guarding when necessary. When the dagger (*main-gauche*) was used, it was held in the left hand like a sword, the point *upwards*, the thumb extended along the blade in a spoon-like hollow made to receive it.

Amazing are the gross errors one sees in pictures, and even more inexcusable, on the stage: Hamlet and Laertes, with the

most perfect self-possession and grace, performing a salute absolutely impossible with the heavy rapier, a salute which was only established in its details some fifty or so years ago, while Osric, the courtier, expressly says, the weapons are "rapier and dagger."

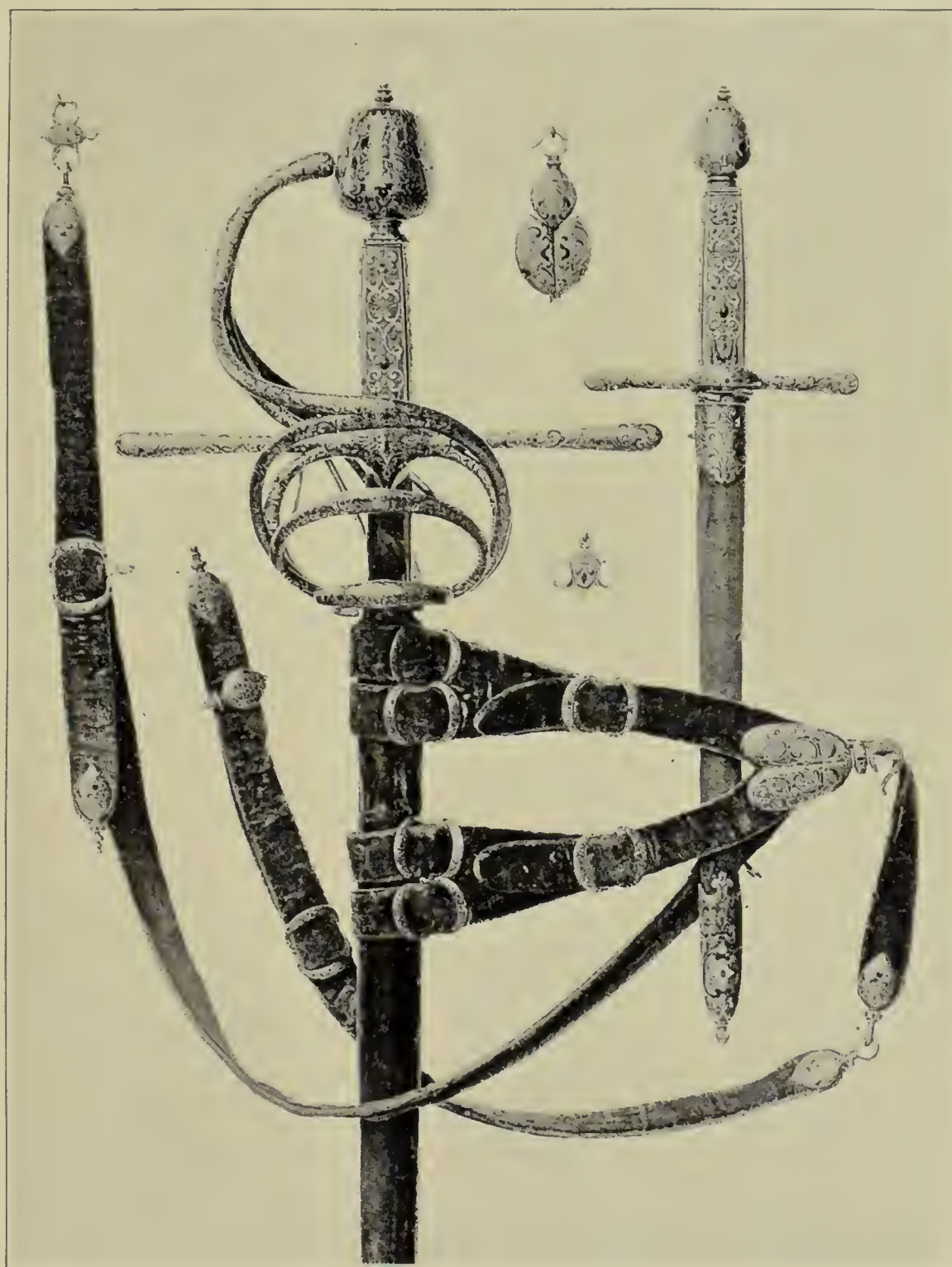
Manciolino and Marozzo may be taken as typical of the masters of the sixteenth century. The former's book is dated 1531. Seemingly each master taught a collection of tricks which were practiced till the ease and quickness acquired in their execution made them very dangerous to an unscientific opponent. All these were dubbed with quaint and fanciful names. His little work is so full of rules of honor and ways of picking and deciding quarrels in a gentlemanly manner, that but a scant account of fencing is found there.

Marozzo's book, published 1536, fixes in a more precise manner the systems in favor before the superiority of the thrust over the cut became known. He taught in Bologna, and may possibly be considered the greatest teacher of the old school, that rough and undisciplined swordsmanship which depended as much on dash and violence and sudden inspiration as on cultivated skill.

A diagram on the wall showed all the cuts. It consisted of a circle divided by four equidistant diameters. These were *mandritto* (from *mano-dritta*): *tondo*, circular, delivered horizontally; *fendente*, vertical downwards; *montante*, vertical upwards; *squalemrato*, oblique downwards. The same could be delivered on the enemy's right side and were called, *roversi*.

The *false edge* was generally directed at the wrists and knees and were called *falso dritto* and *falso manco*, according as they were delivered from the right or left.

A curious point about all books of fence in the sixteenth century, is that though the word "*parry*" is continually used, not a single *parry* is ever defined. The principle on which the masters of that period founded their practice, was evidently that all attacks, if they could not be warded off with the buckler, cloak or dagger, were to be met by a counter attack or by stepping aside. It was believed that a similar cut, dexterously delivered so as to obtain mastery over the *faible*, could always be counted on to act as a parry as well as an attack; evidently a relic of the days when the sword was looked on as an offensive weapon only. (P. 50. E. Castle.)



French Rapier and Dagger with Belt. About 1570. Musée d'Artillerie.
Paris.

Remember that about this time private dueling and cavalier quarrelsomeness amounted to a perfect mania. The fencing master was no longer merely a teacher of efficacious, if rascally tricks, he was becoming a model of gallant deportment, a recognized arbiter on matters of honor. He often was a gentleman and always posed as such. Pierre de Brantôme, the popular French historian, who died in 1614, is very full of this subject in his *Discours sur les Duels et Rhodomontades*, and gives a vivid picture of the foolhardy manner in which men exposed their lives on the most trivial occasions. Long before Brantôme the French had acquired the worldwide reputation of being the most quarrelsome, as well as the most frivolous of nations; but the latter half of the sixteenth century saw, with the disuse of the judicial duels, the rise of that extraordinary mania for private dueling, in which seconds as well as principals fought with equal ferocity, and which cost France alone, in 180 years, the useless loss of 40,000 valiant gentlemen.

There was an old chivalrous, or rather quixotic notion in France that it was unworthy of a gentleman to learn the cunning of fence. They got bravely over this in the days of civil strife when the tremendous advantage of skill was demonstrated in the endless daily encounters. In the early part of the sixteenth century, although gentlemen shunned the reputation of *bon escrimeur*, it was nevertheless the custom to go to Italy, surreptitiously to learn the practice of arms in the Bolognese and Venetian schools, and also, when possible, a few tricks of the trade in the shape of an infallible secret thrust, purchased for fabulous sums from some redoubtable *spadacino*. These arts they brought back to France and practiced on their unsophisticated countrymen. (Eg. Castle, p. 77.)

It was a time when a woman's power of fascination was reckoned by the number of duels, and consequently of deaths, she had caused.

Remember Mercutio's rebuke to Benvolio, who did not go one jot beyond the mark in describing the quarrelsome habits of the empty-headed young men of those days:

"Thou! why thou wilt quarrel with a man that hath a hair more or less in his beard than thou hast. Thou wilt quarrel with a man for cracking nuts, having no other reason than because thou hast hazel eyes; what eye but such an eye would spy out such a quarrel? Thy head is as full of quarrel as an egg is full

of meat; and yet thy head has been beaten as addle as an egg, for quarreling. Thou hast quarreled with a man for coughing in the street, because he hath wakened thy dog, that hath lain asleep in the sun." (*Romco and Julict*, III. i).

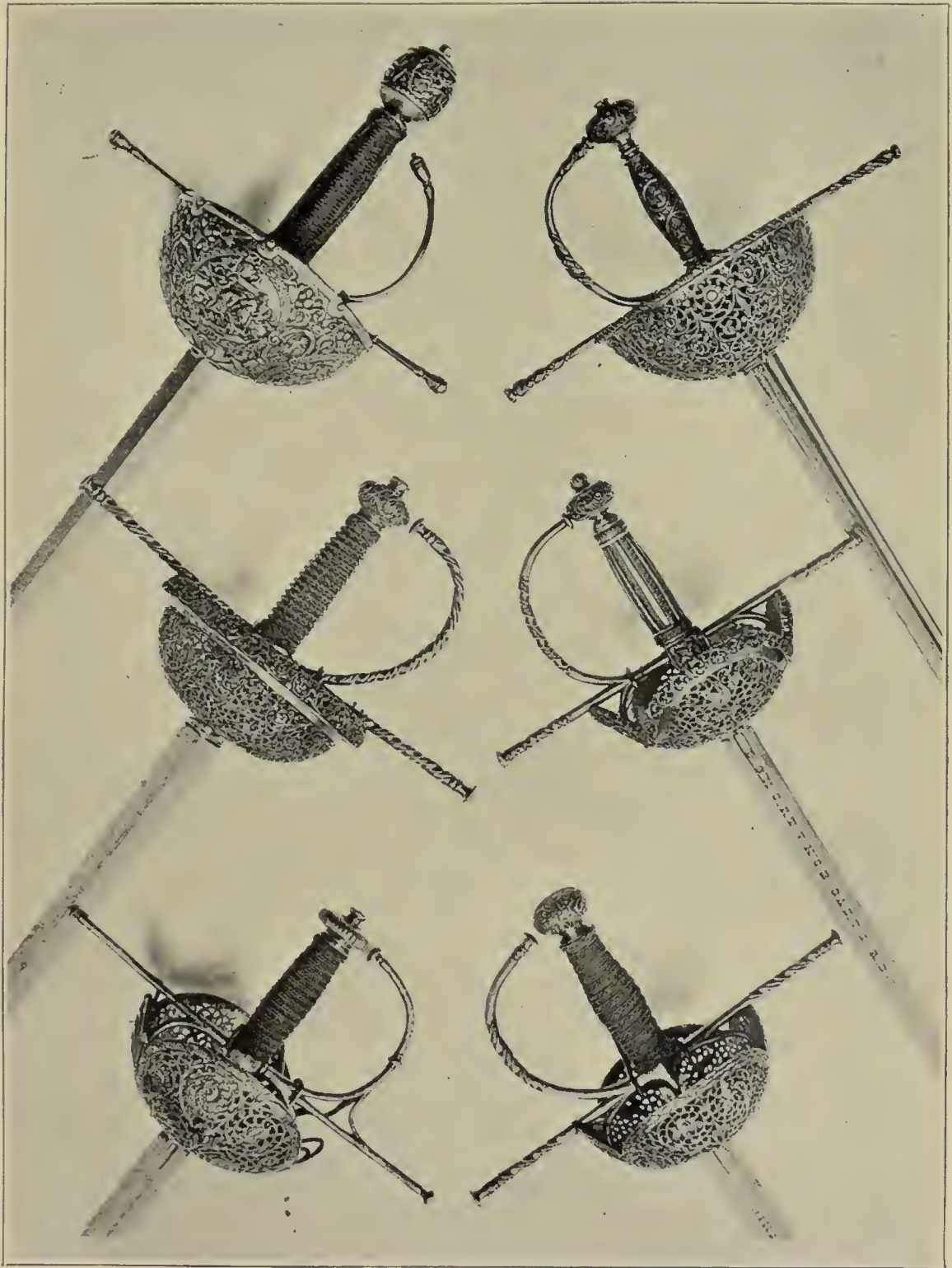
The Italians seem to have been the first to perceive the superior capabilities for elegant slaughter possessed by the point as compared with the edge. They accordingly evolved the rapier, and with this lighter weapon devised that brilliant, cunning, catlike play, known as rapier fence.

The rapier was soon adopted everywhere by men of courtly habit, but in England not without protest from the older fighters, and especially from the members and admirers of the Corporation of Defense Masters. The old sword and buckler were reckoned as your true English weapons, as boxing is in our time. By Elizabeth's day the rapier was firmly established as the only gentlemanlike weapon, and admirable indeed it was both to look at and to wield, besides being, in proper hands, most conclusive.

When the systematic fence went over to England it was already much simplified, and improvement in the art has always been, from that day to this, in the direction of simplification.

Bottes secrettes, "secret foynes," or thrusts, were taught then as they are to-day, but they were taught in jealous privacy. Constant practice at one particular trick, especially with the long rapier, which required considerable muscular strength, might render any peculiarly fierce, sudden and audacious stroke excessively dangerous to one who had never happened to see that trick before. Loose-play being unknown between pupils, the possessor of a specially handy thrust used it only in the field, taking care that his opponent did not live to learn the secret.

Brantôme mentions Tappa, the Milanese, who could teach you to cut out both your opponent's eyes with a *riverso tondo*, or circular reverse of the point. Caizo, much favored at one time by the French court, taught, by a *falso manco*, that is, a left-hand drawing-out at the inside of the knee, how to hamstring a person. Le Flamand, a French master in Paris, was the reputed inventor of a jerky time-thrust at the opponent's brows, which was a certainty. It was an *imbrocato* at the head. The *imbrocato* reached the adversary over his sword, hand or dagger, traveling rather in a downward direction, and evidently delivered with the knuckles up, somewhat like our thrust in "prime" or "high-tierce." The *stoccata* was a thrust underneath his guard.



Spanish Rapiers. 1600 to 1640. Musée d'Artillerie. Paris.

As said before, the rapier, well balanced as it was, was too heavy to allow of quick parries with the blade, so thrusts were avoided by an *incartata*, a vault to one side, by ducking, or beaten aside by the gauntleted left hand or dagger. The *passado* was passing one foot before the other in delivering the attack; *botta lunga*, a lunge; *caricado*, a far-reaching combination of the two.

There were six sword movements: *stoccato*, a thrust with the nails up; *imbrocato*, with the nails down; *punta reversa*, any thrust delivered from the left side of the body; *mandrito*, a cut from the right; *riverso*, from the left; *stramazone*, a right down blow with the extreme edge or point, given with a wrist movement.

The Italians were undoubtedly the leaders, but toward the beginning of the seventeenth century the Spaniards developed a school of their own, now as dead as the Dodo, which for a short while was all the rage both in England and France. The Spanish masters instructed their pupils on mathematical lines, with the help of diagrams drawn on the floor within a circle, the radius of which bore certain cryptic proportions to the length of human arms and Spanish swords. The circle was inscribed in squares, and intersected by sundry chords bearing occult but incontrovertible relations to probabilities of strokes and parries. The pupil was to step from certain intersections to certain others. If this was correctly done—victory; if not—alas. The Spaniard was a formidable duelist more from the quality of the man than from the excellence of his art.

The *coup de Jarnac* is so often referred to that a short account of that memorable trial by battle may not be unwelcome.

The actors were François de Vivonne, Lord of Châtaigneraie, and Guy de Chabot, eldest son of the Lord of Jarnac and many other things. These two young men were warm friends; but de Vivonne repeated to the king, Francis I., a scandalous story reflecting on de Jarnac and a lady. The King twitted de Jarnac about it. De Jarnac gave the lie to de Vivonne, who demanded trial by battle. The King, feeling that he was somewhat to blame in the matter, refused. Francis died March 31, 1547, and was succeeded by his son, Henry II. Châtaigneraie applied to the new King and it was decreed that the combat should take place at St. Germain-en-Laye, in thirty days, the judgment being that the vanquished man, both in himself and his heirs, should be degraded and ever regarded as ignoble persons. Châtaigneraie

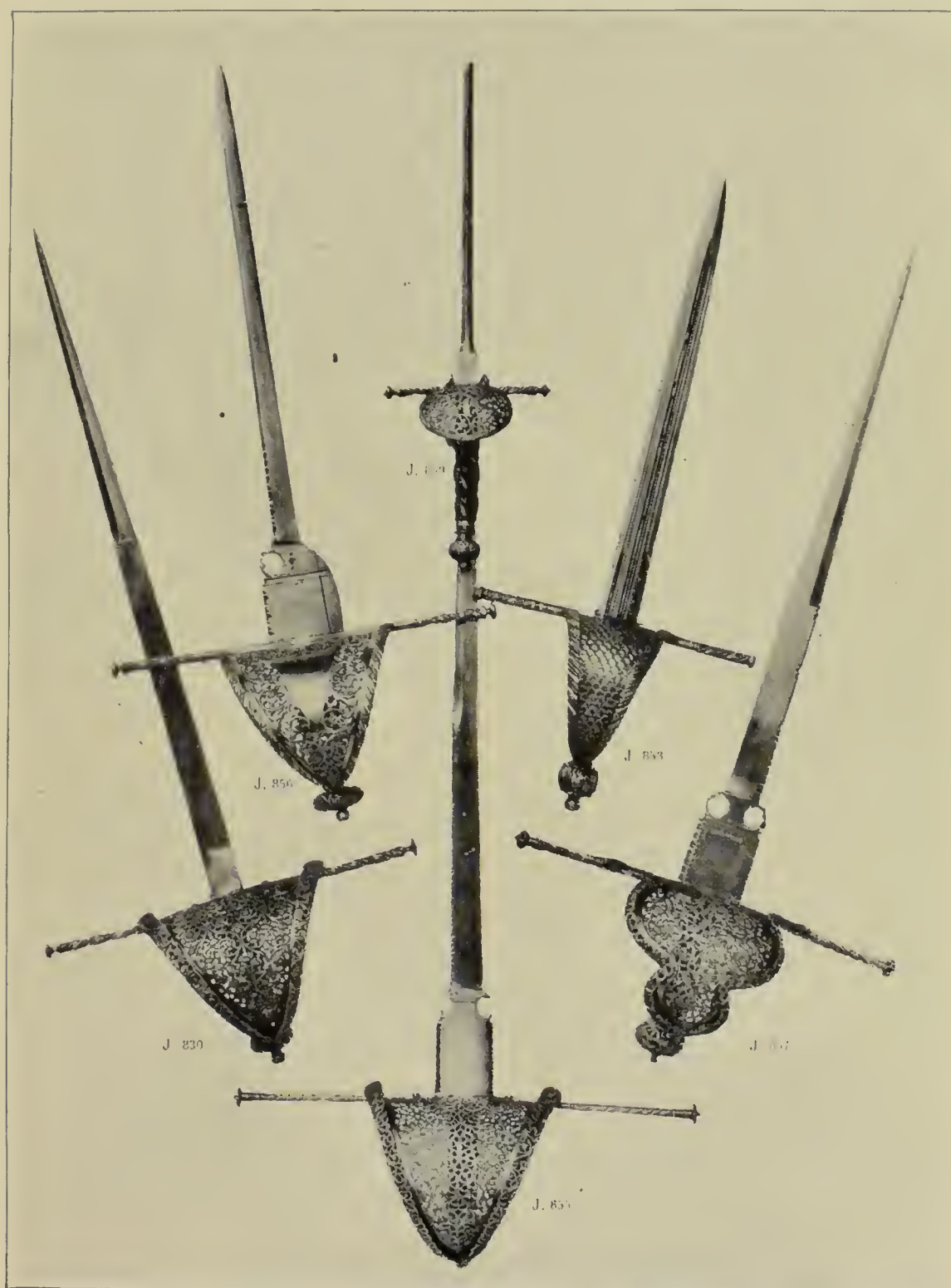
was a perfect giant and skilled in all manly exercises; regarding victory as absolutely sure he took no further thought of the matter. Not so de Jarnac; he searched out Captain Caizo, famed for his secret *bottes*, and diligently, in secret, worked at one. In addition he visited all the monasteries and churches and paid for prayers for his success in the murder he contemplated.

De Jarnac, as defendant, had the choice of weapons. He chose a shirt of mail; a breastplate or corselet; a morion, the usual head gear worn by foot soldiers at that time; a pair of gauntlets, and a peculiar brassard for the left arm which held the arm quite stiff. De Vivonne's friends protested against this, as it quite prevented any wrestling, and de Vivonne was the champion of Brittany, but he haughtily accepted it.

The battle began: several fierce blows and thrusts were given and parried; suddenly de Jarnac shifted his ground, feinted a swashing blow at his opponent's head and so drew up the shield to defend it. As it rose he dexterously passed the point behind de Vivonne's left knee, his hand in pronation, and with a quick movement snatched it back, bringing the sharp false edge in contact with the lower part of the ham, by a draw cut severing everything down to the very bone. Châtaigneraie fell; his life was spared, but he tore his bandages off and died a short time after.

The stroke was a perfectly fair one as, both being clothed in half armor, the only uncovered parts were the face and legs.

Changing the rapier from the right to the left hand was, it seems, regularly taught, and practiced with success when the dagger was not used. The so called "foils" of the eighteenth century were certainly a severe enough sort of implement, eliciting vague ideas of pokers and crowbars, but the art then practiced was of a most elegant and systematic character; a man who hit his opponent anywhere but on the fencing jacket committed an act of clumsiness not to be tolerated too often. But what the process of teaching and being taught the cut-and-thrust fencing of the sixteenth century must have cost in bruises and disfiguration is a difficult thing to realize. Although the word "foil" is used constantly by authors of that period, there are no reasons to believe that they were anything less severe than "foiled" or *rebated* swords. In a system which consisted of deliberate thrusts at the belly and at the face at very close quarters, and of cuts not only from the wrist but from the forearm, the practice of the school was probably of a very conventional type.



Left-hand Daggers (*Mains-Gauches*), for Parrying Rapier Thrusts.

J. 830. Spanish, end of sixteenth century. J. 855, 6, 7. Spanish, early seventeenth century. Note holes for catching opponent's blade, breaking it, thus rendering assassination easy. J. 858. Italian, same date. J. 859. Same date.

When the scholar had become familiar with the art of passing sideways and "with great readiness thrusting his Rapier into his Maister's belly," he was introduced to passes backward, accompanied by *riçersas* at the head of the assailant on the delivery of a *stoccata*.

"Saint Didier," towards the end of his book, says, "I have felt willing to teach and demonstrate four good and subtile ways of seizing your enemy's sword, which may be found of avail as well in attack as in the defence." In rapier play, parrying with the hand often resulted in the adversaries exchanging swords.

* "Saint Didier's" illustrations represent a combat between "Le Lieutenant" and "Le Prevost." As this point is of great interest in connection with the fencing scene in Hamlet I give it in full.

The Lieutenant, who came on guard *left* foot foremost, delivers an *estoc* at the Prevost by passing his right foot forward. The Prevost draws his left foot back, crosses his opponent's sword, his own at high sixte, forte on faible, nails up; then suddenly bringing his *left* foot to the front again, he seizes the Lieutenant's sword. Bending his arm, still in sixte, he keeps his own point menacing his adversary's face, and tries to wrench his adversary's sword away. The Lieutenant, finding himself in jeopardy, bends his body to the right (thus avoiding the Prevost's blade) and at the same instant brings forward his *left* foot, guarding with the left hand and seizing at the same time the Prevost's hilt round the *quillons*, with the same hand.

Either party, by twisting the *quillons* of his adversary's sword, obtains the advantage of leverage over his sword-hand. The shortest plan at this juncture is, evidently, for each to abandon his own sword and continue the fight with that of his opponent, which they did. This last stage is shown in a cut where both opponents have stepped back and are on the point of passing their rapiers from the *left* hand (by which it was seized) to the right, preparatory to recommencing. (E. Castle, p. 83.)

The lunge, the complete development of the attack, a forward movement of the leading foot, is given, seemingly, by di Grassi in 1570. His book was "Englished" in 1594 by an enthusiastic amateur, known to us only as "J. G., Gentleman." At this period the movements of the feet were passes, or steps forward or back-

* Saint Didier, Henry de, *gentilhomme provençal*, published his first work, Paris, 1533; his second, Paris, 1573.

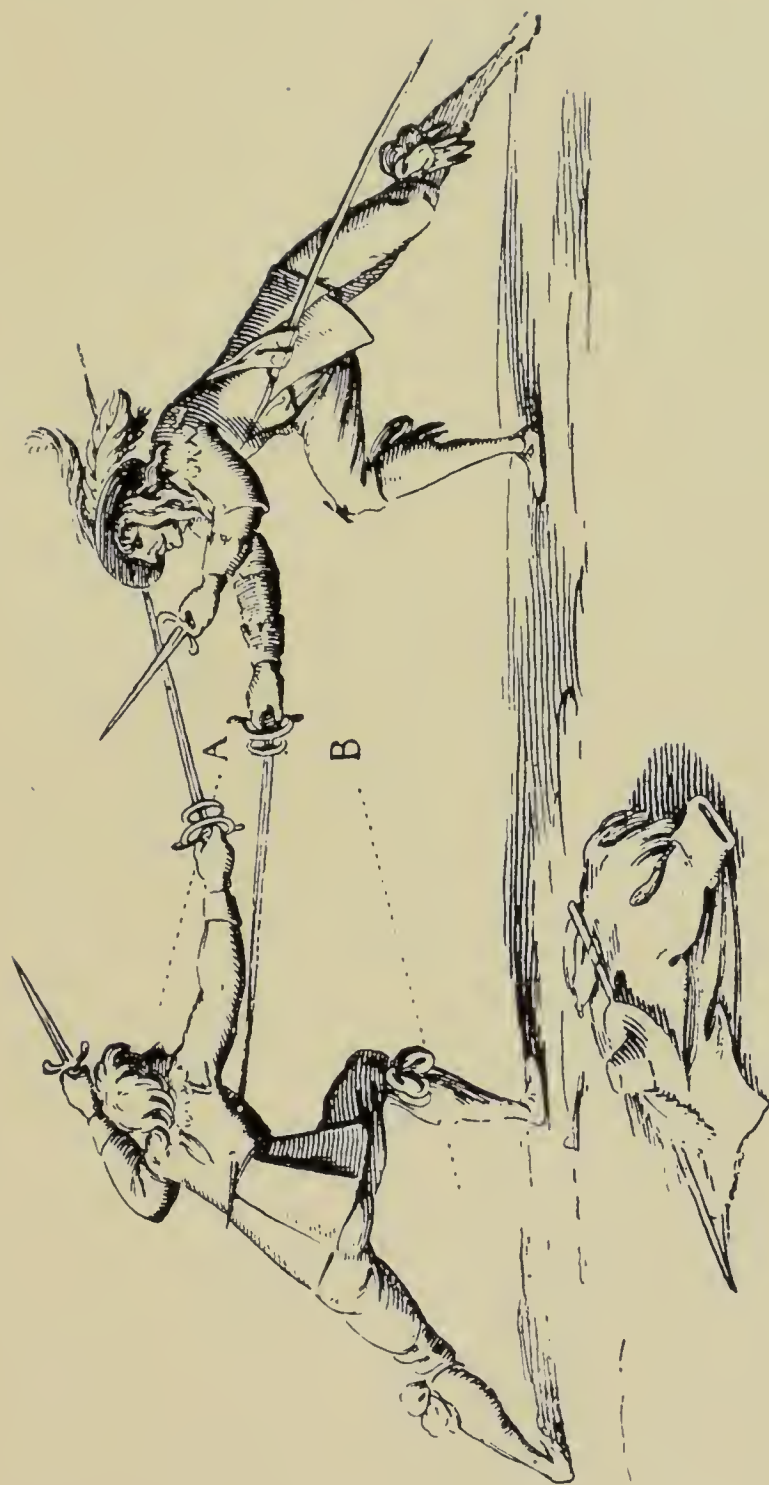
ward, or to either side, with *voltes* or *demi-voltes* as occasion required, to effect which it was necessary to keep the knees as nearly straight as possible. J. G., with the help of di Grassi, gains an addition to his reach by "somewhat encreasing his fore-foot more forwardes, to the end that the thrust may reach the farther." (Hutton, p. 187.)

Another master, Fabris, teaches the use of the pommel in close action. As our word "pommeling" or "pummelling" is derived from this, it may have been effective but certainly was not elegant fencing. The *demi-volte* consisted in straightening the legs and passing the left foot a quarter of a circle backwards, to the right, turning on the toes of the right foot, at the same time straightening the sword arm to receive the enemy on the point, your own body being out of line. In the *volte* the left foot described a half circle, so that the back was half turned to the enemy.

Louis XIV. (1643 to 1715) put a stop to the fighting of the seconds, thirds and fourths by the simple process of hanging a few of them. In many instances the presence even of seconds was dispensed with as being too dangerous. Pretended chance meetings were arranged and single-handed clandestine combats took place; but these gave opportunity for tricks little short of assassination, concealed mail, throwing snuff or dust in the eyes, a sudden cry or remark to throw one off one's guard, etc.

The *colichemarde*, a French pronunciation of Koenigsmark sword, came in early in the reign of Louis. This sword was much lighter than the rapier though not very much shorter. The forte for about eight inches up the blade was very broad, then it narrowed into a fine triangular blade. This type of small-sword continued in use until about the middle of the eighteenth century, and serious was the work which it often performed. Even this somewhat lumpy weapon brought in a great improvement in fencing. The circular parries had long been hoped for and were now just possible—the *contres* of quarte and of tierce. As the utility of the circular parries became more manifest, the shape of the blade was altered to assist it; the abnormally broad forte was fined down and the blade tapered gradually from its setting in the hilt up to the point. Thus the "walking sword" of 1760 was as light and manageable as the most up-to-date fencing foil of the twentieth century.

During the centuries we have glanced at, anything in the shape



Rapier and Dagger. Parry of *High Quarte* and *Riposte* under the Arm. After Alfieri; Padua, A. D. 1644. The line A gives the alternative of a thrust at the face, and B that of a *mandritto* at the leg. (*Old Sword Play*. Alfred Hutton.)

of a protection to the face, in a fencing bout, was unheard of; wherefore the need of the enormous buttons "so big as a tennis ball" recommended by fencing masters in the rapier days, as also of the ultra-academic custom in the *salles d'armes* in the earlier part of the small-sword period, that a man having made a successful parry, should withhold his *riposte* until his opponent had recovered from the lunge, in order to obviate the danger of injury to the face.

The elder La Boessière, say 1766, is supposed to have first advocated the mask. It was of solid metal with holes for the eyes and mouth. Needless to say it was at first looked on with contempt. The sandals, plastron and gauntlets were also used or were in use at that time.

Let me end with some general hints as to your duties as second or as principal in your next duel with swords, when the world moves backwards fifty years.*

The ground must be smooth and even, without dips or inequalities that can be in the slightest degree dangerous. Be particular to avoid a place where there is any grass, it is slippery and may imperil your friend's life. See that not even a little root projects, for it might easily trip him or throw him off his guard at a critical moment. Never let your man face the sun, the glitter of blades confuses the eye and causes hesitation. Refuse to allow a parry with the hand, for between the open palm which merely brushes the blade aside, and the hand, which by a nervous movement closes on the blade unconsciously and holds it fast, the difference is very hard to seize. It passes like a flash, but it means assassination. When the principals have taken their places and the blades are crossed, the seconds should stand within reach, holding a sword or walking stick, ready to stop the fight should an irregularity occur, or if either of the men should slip, or stumble, or be disarmed or wounded.

So; our men are placed, the preliminaries are all settled. One of the seconds says, "Gentlemen, are you ready?" An affirmative answer from each of the principals. "On guard." Then he steps back one or two paces and gives the fatal word, "Go!"

* *Secrets of the Sword*, translated from the French of Baron de Bezan-court, 1900; being an experienced duelist's advice to his fellow-countrymen.

CERTAIN INCIDENTS IN THE EVOLUTION OF THE MODERN WARSHIP.

BY CHARLES H. CRAMP.

(Read to the Numismatic and Antiquarian Society of Philadelphia, April 6th, 1905.)

Very little advance had been made in the character of warships from the time of the Armada to the building of the great ship of the line "Pennsylvania," the launching of which I witnessed in 1836.

This ship, while she was the largest constructed up to her time, differed but very little from the ships of a century before. She was practically a large "Bonhomme Richard," "Constitution," or "Victory." Between the time of laying the keel of the first "Pennsylvania" and the launching of the second, steam was introduced in battleships as an auxiliary power in propulsion. In the second "Pennsylvania" steam alone is used.

While in the first, guns, anchors, boats, and steering-gear were operated by hand, in the second they are operated by machinery. In the first they carried no ice; in the second they make it, and fresh water is distilled from sea water.

While both ships carry guns, the difference in the size of them is so great that a comparison is inadequate to describe them.

The "Pennsylvania" of to-day is furnished with *forty-eight* steam engines and pumps in addition to the main engines, and *one hundred and ninety electric motors* to operate ammunition hoists, ventilation system, boat cranes, turrets, laundry, watertight doors, winches, etc. In the first "Pennsylvania" what was not done by hand was not done at all.

COMPARISON BETWEEN "NEW IRONSIDES" AND "IOWA."

A comparison between the "New Ironsides," built in 1862, and a modern battleship, the "Iowa, built in 1897, in an

address read by me before the Naval War College in Newport, will furnish an additional example of the great and radical changes that have occurred during the last half century. I quote from this address as follows:

"I cannot better illustrate my point than by comparing the first and last seagoing battleships built and delivered to the government by the Cramp Company. The first was the 'New Ironsides' built in 1862. The last is the 'Iowa' completed in 1897. Each represents the maximum development of the day.

"The 'New Ironsides' had one machine—her main engine, involving two cylinders. The 'Iowa' has seventy-one machines, involving one hundred and thirty-seven steam cylinders.

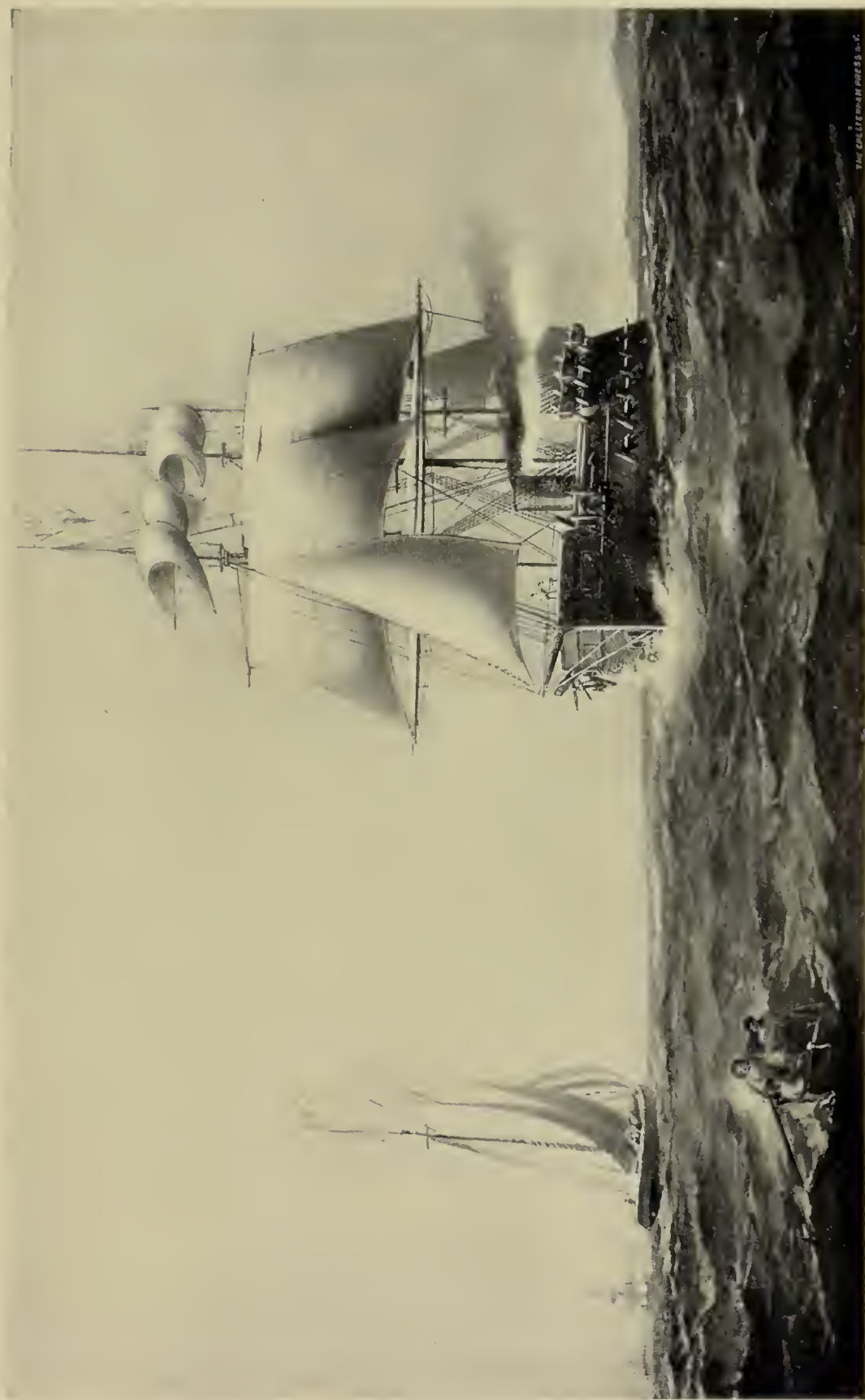
"The guns of the 'New Ironsides' were worked, the ammunition hoisted, the ship steered, the engine started and reversed, the boats handled—in short all functions of fighting and maneuvering—by hand. The ship was lighted by oil lamps and ventilated, when at all, by natural air currents. Though of the most advanced of her type of her day she differed from her greater battleship predecessor—the old 'Pennsylvania'—only in four inches of iron-side armor and auxiliary steam propulsion. She carried fewer guns on fewer decks than the 'Pennsylvania,' but her battery was nevertheless of much greater ballistic power.

"In the 'Iowa' it may almost be said that nothing is done by hand except the opening and closing of the throttles and pressing of electric buttons. Her guns are loaded, trained and fired, her ammunition hoisted, her turrets turned, her torpedoes—mechanisms in themselves—are tubed and ejected, the ship steered, her boats hoisted out and in, the interior lighted and ventilated, the great searchlights operated and even transmitted from bridge or conning tower to all parts by mechanical appliances.

"Surely no more striking view than this of the development of thirty-five years could be afforded.

"The battery of the 'New Ironsides' was mounted in broad-side and she had eight ports on a side, out of which she fought seven 11-inch Dahlgrens and one 200-pound Parrot, the maximum train and arc of fire being 45 degrees.

"The 'Iowa's' four 12-inch guns are mounted in pairs in two turrets and train through arcs of about 260 degrees forward and aft respectively. Her eight 8-inch guns are mounted in



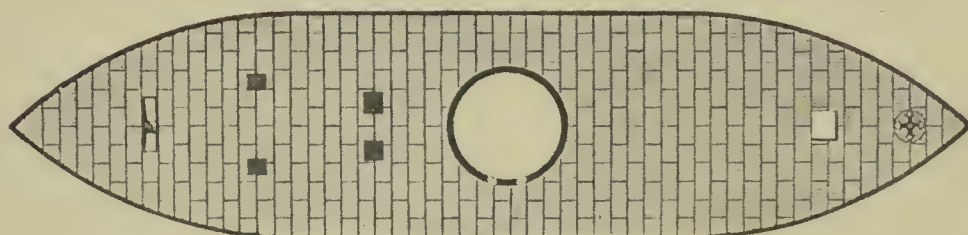
Battleship "New Ironsides,"

THE "MONITOR." DESIGNED BY JOHN ERICSSON. BUILT AT NEW YORK, 1861.

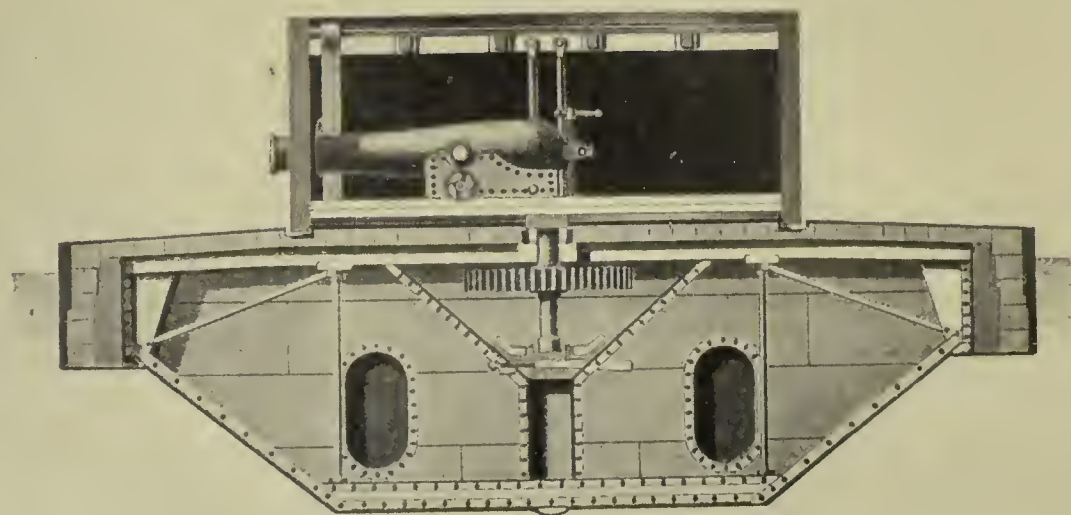
SIDE ELEVATION.



DECK PLAN.



TRANSVERSE SECTION OF HULL AND TURRET.



These illustrations are from "Contributions to the Centennial Exhibition by John Ericsson, 1876," and have been made by courtesy of the Franklin Institute, Philadelphia, 1906.

pairs in four turrets and each pair trains through an effective arc of about 180 degrees.

"The 'New Ironsides' had no direct bow or stern fire.

"The 'Iowa' fires two 12-inch and four 8-inch guns straight ahead and straight astern.

"The maximum shell range of the heaviest guns of the 'Ironsides' was about a mile and a quarter; that of the 'Iowa's' heaviest guns is about 8 miles. The muzzle energy of the 'Ironsides' 11-inch smooth-bores was to that of the 'Iowa's' 12-inch rifles about as 1 to 26."

One feature of the ships of the Spanish Armada period exists up to the present time, namely, the presence of marines in American and British ships. In the days of the Armada the only fighting done on warships was that by the marines.

It was not until the Crimean War that the first break in the character of the hull occurred, when the French used the armored vessel. The most conspicuous ship was "La Gloire" and it was from her that Mr. Bartol conceived the idea of building an iron-clad for our navy during the Civil War. I was requested to get up plans and proposals for the hull of a ship which afterwards turned out to be the "New Ironsides." A few months before this ship was delivered to the government the battle between the "Monitor" and "Merrimac" occurred, an event that had more to do with the great changes which exist at present than any other.

The battleship of to-day is a heavily gunpowered ship, with heavy gun protection in the way of armored sides, with the Cowles turret adapted as a shield in working heavy guns—in fact, a fighting machine.

An account of the construction and development of the modern war vessel is well illustrated in the history of the "Monitor" type, the "New Ironsides," and the fast cruisers during the last half century.

THE MONITOR*

The successful repulse of the "Merrimac" by the "Monitor," driving her back into Norfolk, gave a boom to the "Monitor" type, the extent of which had never been witnessed in this country.

The results that follow successful combats in war time, were

*From forthcoming *Memoirs*, to be published by J. B. Lippincott Company.

on this occasion of an extraordinary character, the whole country being aroused to the highest pitch of excitement.

The designer of the ship, John Ericsson, and some of the officers, were the recipients of the most extravagant and hysterical demonstrations in the way of hero worship.

Mr. Ericsson had been conspicuous in promoting screw propulsion, and patented his own screw in 1836. Previous to this Mr. John L. Stevens of New York had patented a screw propeller which was successfully tried in 1804, and is practically the screw in use at the present time. Many patents for screw propellers had been granted in England between 1802 and 1840; eleven had been patented in the United States before that time. Owing to absence of machine shops and competent workmen in this country, the promoters of steam propulsion were compelled to develop the slower motioned and simpler paddle-wheel method, until Fulton's success with his vessel with its imported machinery gave machine construction a start.

Mr. Francis B. Stevens's paper on the "First screw propeller boats to navigate the waters of *any country*" states in reference to this (page 23):

"An inspection of the rude workmanship of the twin-screw engine, as well as that of the boiler, will explain the reason for the abandonment, by Colonel Stevens, of his plan of screw propulsion. There were no tools or competent workmen in America at that date to properly construct the steam engines and the boilers that he planned between 1800 and 1806. Success was impossible."

And on the last page he states:

"In the year 1840, the United States was well prepared for the introduction of the screw propeller; having then an abundance of machine shops, good tools, and excellent machinists; and the first trial of a screw propeller, of almost any form, driven by a steam engine, and placed on a vessel fit for commercial purposes, must then have led to the introduction of screw propulsion."

Mr. Ericsson reached this country in November, 1839, and immediately made himself conspicuous as an advocate of screw propulsion; and it was through his persistent efforts and convincing personality that his name and the screw propeller became inseparably associated.

Commodore Stockton later on induced the government to build the "Princeton" to be fitted with Ericsson's engines and screw, the first warship in this country to adopt the screw.

An illustration of the effect that the battle between the "Monitor" and "Merrimac" had on the popular mind may be found in the address of Bishop Simpson at the Academy of Music at Philadelphia in 1862. During the Civil War addresses were made throughout the country by well-known orators and statesmen, discussing its progress and intended to promote a patriotic spirit and to encourage the despondent. I was present on the occasion referred to, when the bishop stated that "the Almighty had directly interposed in the contest between Captain Ericsson and George Stephenson," both of whom (among others) had responded to the request of the Great Western Railway Company to bid for plans for the most improved locomotive engine; five hundred pounds sterling having been offered as a premium for the best. The following engines were entered for the prize: the "Novelty," by Ericsson; the "Rocket," by Robert Stephenson; the "Sans Pareil," by Timothy Hackworth; and the "Perseverance," by Mr. Burstall. George Stephenson's plans were clear and well formulated, while those of Ericsson were vague, obscure and somewhat fantastic, and the railway managers accepted the plans of Stephenson. Joseph Harrison, in his book, *The Locomotive Engine*, states that the prize was easily won by Stephenson's "Rocket"—it having in some respects more than fulfilled the requirements of the trial.

Bishop Simpson in referring to this incident said that "the Almighty had interposed to prevent Captain Ericsson from succeeding there, so that he might become disgusted with England and shake the dust of that country from his feet and depart for America in order that he might be here ready to save the country:" his words as near as I can remember.

In using the expression "to save the country," Bishop Simpson looked on the fight between the "Monitor" and the "Merrimac" as a great many other people did—that is to say, if the "Merrimac" had escaped she would have bombarded Philadelphia, New York and other cities of the North, thereby compelling the government to submit to the South. But the "Monitor" having destroyed her before she got out, John Ericsson was therefore entitled to all the credit due to a person who had been specially delegated by the Almighty for saving this country, notwithstanding it was discovered a very short time after, that even if the "Merrimac" had escaped after her encounters with the "Cumberland," "Congress" and "Monitor," it would have been

impossible for her to have gone as far North as Philadelphia or New York. It was found that she was very badly crippled as a result of her ramming the "Cumberland," and the statement was made by those who temporarily repaired her in Norfolk that her bow was split to a great distance below the water. To use the words of one of the workmen, he had "put more than a bale of oakum in the opening."

The construction of the ironclads "New Ironsides," "Monitor" and "Galena," which had already been practically taken out of the hands of the construction department of the navy by the Secretary of the Navy himself, marked the point when the "Monitor" became the ideal warship, as the Secretary became a convert to the "Monitor" craze after the disabling of the "Merrimac." A sort of sub-department of the navy was created in New York for the purpose of building monitors. This establishment was placed under the immediate supervision of Admiral Gregory, the active head being Chief Engineer A. G. Stimers, who had been the chief engineer of the "Monitor" during her engagement with the "Merrimac." He had associated with him Isaac Newton and Theodore Allen, the nephew of Mr. Allen, of the Novelty Works in New York. These gentlemen were educated engineers and men of repute, but had little or no practical experience in ships or engine matters.

This sub-department soon assumed a position of great power and responsibility; Messrs. Stimers and Allen were autocrats; they spent money lavishly, ordered vessels, designed them, made contracts, sub-contracts, and purchases, and carried everything with a high hand. Mr. Lenthall, the chief constructor of the navy, and Mr. Isherwood, who was on his staff as engineer, were entirely set aside and practically disappeared from the scene.

The headquarters in New York was called the "Draughtsmen's Paradise" on account of the great number of draughtsmen employed there, who were getting twenty dollars a day, and whence the most extraordinary display of drawings was issued to the various machine shops where monitors were under construction. The inspectors of construction that were employed emulated their superiors in carrying things with a high hand. A large number of monitors were built, slightly improved in structural detail over the original "Monitor," and were engaged, as soon as finished, in the operations before Charleston. Up to that time our concern had not built any monitors, as we were not in



Last Gun from Fort Sumter. "Ironsides" and "Monitor" in the distance. The "Wabash," the last of the famous wooden ships of the U. S. Navy. From a water-color by A. G. Stewart, Passed Assistant Engineer, U. S. N.

what was called the "Monitor Ring," not having fully endorsed the type nor manner of construction.

Immediately after the "New Ironsides" had been engaged in a small way in the first fight at Charleston, we recommended that the government build other vessels like her but with twin screws and various other improvements. By request of Assistant Secretary Fox, I prepared the plans of a number of war vessels, some all iron, and some of wood and iron, in the construction of the hull, mostly of the broadside armored type, also several improved sea-going monitors. All were thrown aside without examination by the navy department. Some of these models and plans went to the Franklin Institute with those of Mr. Lenthall after his death. Certain others came into the possession of representatives of foreign navies who swarmed here during the war, and one of the plans made its appearance in Scott Russell's book as a "Danish Monitor."

The department in Washington having refused to listen to or recommend anything, we were ruled out of naval construction for a time.

LIGHT DRAFT MONITORS.

When the last batch of monitors was ordered, which were called the "Light Draft Monitors," intended to operate in the waters of the Albemarle and Pamlico Sounds, and other shallow waters in the South, we responded to the advertisement for twenty of them, by bidding for one or more.

It was found that we were a little higher than Harlan & Hollingsworth, the lowest bidders, but the time in which we offered to build them was shorter. The government promptly gave us one and the Harlan yard one, and notified eighteen other bidders that they could each have one at the same price as ours, which amounted as nearly as I can remember, to \$360,000. Some of the bids ran as high as \$750,000, and these bidders had some delicacy in accepting prices at one half, as to do so would be an acknowledgment that they did not know what they were about or were trying to rob the government.

The fact is that none of the bidders except ourselves and Harlan & Hollingsworth were shipbuilders. They were in other lines of mechanical construction and of course did not have the knowledge necessary to do this class of work. Notwithstanding we

were the lowest bidder, thereby saving millions of dollars to the government, only one vessel was awarded to us.

The drawings on which the vessels were to be built were of the crudest character, only a midship section and one or two vague longitudinal sketches were sent out.

Having received our contract, we promptly visited New York to get the plans of construction and engine from Messrs. Stimers and Allen.

The first plan permitted the boilers to come within $3\frac{1}{2}$ inches of the bottom plating of the ship, practically landing the boilers on the $3\frac{1}{2}$ -inch angle bars which had at that time no floors. I suggested rather emphatically that this would not do, and after considerable discussion they concluded to make the boats a little deeper, to give the deck more spring, and to put in shallow floors.

Our boat would have been launched first, but the northward march of General Lee previous to the battle of Antietam prevented the delivery of materials, and our employees had organized themselves into military companies for the purpose of defense.

While these delays affected us, they did not interfere with the progress of the "Monitor" building at Boston. When this vessel was launched it sank to the bottom, having, from lack of buoyancy, filled with water. When she was raised it was found that she could not carry her turret, guns and outfit. Mistakes, it appears, were made in the original design, and weights added without investigating the correctness of the original sketch which, together with the calculations, was furnished by Mr. Ericsson.

After this collapse, Mr. Lenthall and Mr. Isherwood asserted their proper authority. They ordered Mr. Stimers and Mr. Allen to reduce the weights in the turrets and wherever else possible, to make the vessel float. These reductions were communicated to the builders at Chester before they launched the "Tunxis," but they were of no avail, and the vessel proved entirely useless.

Finding that the Boston vessel and the "Tunxis," after the alterations, lacked efficiency, the department decided to rebuild most of them by deepening them, and the whole matter was placed in my hands by Chief Engineer King, who was delegated by the Secretary of the Navy to prepare the plans and to ascertain the cost of the alterations. I found it necessary to increase the depth of the hulls about thirty-two inches, involving the necessity of raising the solid oak decks to that height with the hull proper, together with the armor backing and armor, which had to be

taken off and replaced. A so-called expert was detailed to assist me in my calculations and design, but having no use for him I did not avail myself of his services.

When I sent my plans and our price for deepening the vessel to the department, the Secretary immediately awarded us the contract for deepening ours, and notified the eighteen other builders that he would give them the same amount. The other contractors would not accept and denounced me for not having put a "higher price on the job," when I had the opportunity to do so. I told them that I had estimated that we would make 30 per cent. profit, and I contended that that was enough. Certain other builders ultimately got a higher price; they made all sorts of claims on the government through their representatives by showing or endeavoring to show the Secretary that wages were higher in the localities where these vessels were built than they were in Philadelphia.

As the department subsequently decided not to alter all, about one half were finished without the turrets or big guns, and the necessity for deepening them dispensed with. When completed they were designated as a sort of torpedo boat for harbor defense.

In fact, every one of the builders received a higher price than we did, notwithstanding the drawings, specifications, plans and designs for the alteration were made by me without pay; and, although there was a large saving to the government through me amounting to several millions of dollars, I got nothing, not even thanks.

I might say here that the vessels that were altered according to my ideas and were in conformity with my instructions as to freeboard and all other requirements, would have been efficient warships in the operations in the southern waters if the war had not ended before they were finished.

The sub-department in New York having been abolished on account of the failure of these ships, the navy department still adhered to the monitor type and practically built nothing else.

Mr. Lenthal and Mr. Isherwood, who was on his staff at that time, had no power to antagonize the "monitor craze" successfully. Thus a large one of wood was ordered to be built in each navy yard, to be designed by the constructor of that particular yard, as far as the hulls were concerned.

Notwithstanding the failure of the light draft monitors and

the experience of the others before Charleston and elsewhere, the effect of the craze lasted for a considerable length of time after the war was over.

The "Miantonomah," which was a large wooden monitor built in one of the navy yards and designed by the constructor at the navy yard in which she was built, was sent to Russia under the command of Commodore John Rodgers, with Capain Fox as special envoy to convey to the Emperor certain congratulations. The idea was that the government of Russia would construct a number of large monitors. The trip, so far as that was concerned, was a failure. Commodore Rodgers who was in command, was a captain of one of the original monitors before Charleston in the Civil War, and one of the strongest advocates of that type. As a rule however, the captains were adverse to them.

While the navy department and the naval committees of Congress were favorable, Messrs. Lenthal and Isherwood were against them, but they were very backward in doing or recommending a substitute and permitted themselves to be overruled. In view of this negligence on their part it was argued that it was better to try to do something, even if it turned out wrong, rather than to do nothing at all.

ORIGIN OF FAST CRUISERS.

On account of the heavy loss of our ships captured by the Confederate cruisers and our failure to capture any of them with the exception of the "Alabama," which was discovered and destroyed by the "Kearsarge," our navy department conceived it necessary to have constructed a number of very fast cruisers, faster than any known afloat.

The department delegated Messrs. Stimers and Allen, then in the height of their power in the sub-department in New York, to design and construct them. Not being naval architects and having no naval architect in connection with their department, but having an exalted idea of their own abilities, they designed some ships of a peculiarly fantastic model, and engines of equally fantastic character, which they called the "grasshopper" engine.

Having the power to do so, they invited me to inspect the plans and build two of the ships. On looking over the designs, I began to criticize them and recommend modifications. I was wound

up suddenly by the observation that as they intended to give us two ships and give us what they considered a fair price, we must build them exactly as they were designed. As the price offered was high, and knowing that we would practically have our own way with them, provided that we adhered to the general type of design, for which we had no responsibility, we thought it better to take them and make a handsome sum rather than to stand out on trifles and fight for glory alone.

We had commenced at the beginning of the war with criticizing the monitors, and we got nothing; and the grass might have been growing in our yard had we adhered to that course. So the price was fixed for these ships, and we were about going on when the fatal *contretemps* of the launching of the Boston light draft monitor occurred. The contracts for the cruisers were off, and a large sum of money saved to the government. This was really a great disappointment to us and to several other contractors, because the price fixed for the cruisers was a large one.

After the matter of the fast cruisers was taken out of the hands of Messrs. Stimers and Allen by the abolition of the sub-department, the secretary ordered four of the navy yards to design one each of the same dimensions, giving the engines out by contract to the various engine builders, the engines, with the exception of the "Madawaska's," being designed by Mr. Isherwood. The "Madawaska's" were designed by Mr. Ericsson and were copies of the "Dictator's," and would be considered of fantastic design at the present time; that, however, might be said of most marine engines of that period.

As the department thought proper to encourage private ship-builders, one was given to us—the "Chattanooga"—the entire ship.

We awarded the engines to Merrick & Sons, who built them on their own designs.

The engines designed by Mr. Isherwood were geared engines, the propellers making two and a half revolutions to the engine's one. At that time gearing for screw engines was supposed to be indispensable on the part of most engineers.

All these ships were to be constructed of wood; the models were of the best character, superior to most of the present period. They were built according to the latest improvements in naval architecture, and of the finest devices in the way of rigging, spars, and other outfit, all from the standpoint of the shipbuilder or of

the naval constructor at the navy yard where the ship was built. Their engines, however, never came up to the standard of the hulls and equipment, and as fast cruisers they were failures.

Much was expected of the "Madawaska's" engines by Mr. Ericsson's friends, but after a trial of twenty minutes the engines had to be stopped, as the brasses of the main journals and crank pins were rapidly running into the crank pit long before they had attained their required performance. It has been stated that one of the government ships, the "Wampanoag," made her designed speed in one trial to Charleston.

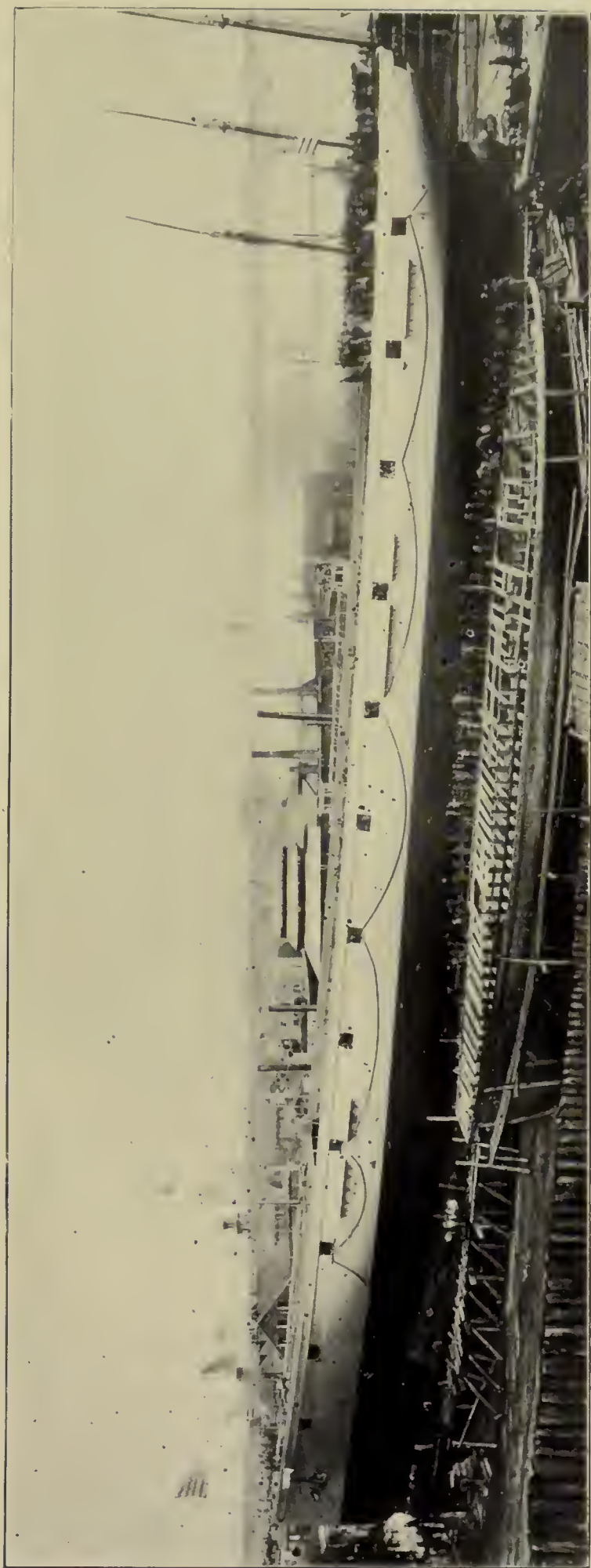
The "Madawaska's" engines were removed and compound engines of poor design, by private parties who had never built a compound engine before, were substituted. Having achieved a great success in building the compound engines of the "G. W. Clyde," of the American Line, on our own design, we proposed to put them in the "Madawaska" at first, but our offer was not accepted.

An effort was made by a private company to utilize the ships in carrying the mail abroad.

During the time of construction the British government was very much interested in this scheme of our country in building fast cruisers.

Captain By-the-sea, who was naval attache of Great Britain, was ordered to investigate the matter, and he decided to obtain the plans and drawings of the "Chattanooga," and applied to the Secretary of the Navy in relation to the matter. The Secretary sent a letter to us stating that, so far as he was concerned, he had no objection. So we furnished Captain By-the-sea with the drawings of the "Chattanooga" in return for some valuable information that he had, which we expected to utilize in some construction of our navy department. We did not, however, realize anything in that direction.

The "Inconstant," built by the British government, was practically the same model as that of the "Chattanooga," but with another deck added to her, which made her look a good deal heavier above the water than the "Chattanooga," particularly as far as the stern was concerned. As the "Chattanooga" did not make a successful trial trip on account of the inefficient power of the engines, a long contest followed between the engine builders and Mr. Isherwood, ending in the engine builders making modifications, and the vessel was laid up.



"Chattanooga." One of the last of the group of wooden fast cruisers for the U. S. Navy.

All of these vessels, being considered too expensive to equip for sea service, were laid up, and being wooden and very much neglected, particularly the "Chattanooga," they rotted at their wharves. The failure of these vessels to demonstrate the propriety of building fast cruisers was due altogether to defective machinery and to defective marine engineering as it generally existed at that date.

EVOLUTION OF MODERN MARINE ENGINES IN THE UNITED STATES.

At the end of the war and for many years afterward, a large majority of the marine engineers of the United States were strong adherents of the side-wheel, walking-beam type of engine; this was particularly the case in the city of New York.

Philadelphia at a very early period advocated the propeller engine, and the success attained there in its construction was never excelled in Europe or America. But a prejudice existed in America, particularly among New York shipbuilders and marine engineers, who spoke of propeller engines with the most profound contempt.

This result was brought about by failure to build from good designs, so that in all large enterprises the walking-beam, side-wheel type of engine prevailed.

For example, when the first line of steamships was established between Philadelphia and Charleston, side-wheel engines were installed by Merrick & Company, who had an interest in the management of the steamship company. In fact, it was this craze for the walking-beam engine and the side-wheels in New York which entirely ruined us as a steamship-building country, and was the principal reason for Great Britain's commercial supremacy on the ocean.

After the government stopped the subsidy, the Collins Line (which was run at an enormous expense) was withdrawn, and as a nation we were completely out of the business. The influence of Philadelphia, having no large ships or large steamship companies, was not listened to. Rather than adopt the propeller and go to Philadelphia to have the engines built, they permitted the whole foreign steamship business, together with all our export and import trade, to go to foreigners.

There was not a time in the history of steam navigation that we did not feel that we could equal or even excel the English

builders of propeller steamships, but we could not induce the New York merchants to embark in the enterprise.

Many reasons were given for the decay of our commerce, but as far as ocean steam navigation was concerned, the adherence to the side-wheel was the principal cause, and I am sure that if we had abandoned it and adopted the propeller, as did the British, it would not have been lost to us.

The ships were right, of the best form and model, and were in advance of anything in Great Britain; but while the shipbuilders in New York were the greatest in the world, the builders of marine engines were the poorest. When it was discovered that the propeller steamship was the best, it was too late to try to recover our trade.

The construction of monitors and machinery during the latter end of the Civil War was very demoralizing and had its effect upon naval construction for some time after; for the construction department, which had not shown much enterprise, had degenerated and the inauguration of the bureau system, by Mr. Isherwood, did not secure the benefits claimed.

It was started by Mr. Isherwood, who was on Mr. Lenthall's staff, by organizing the bureau of steam engineering as an independent bureau and having its head appointed by the President and confirmed by the Senate. Of course he was made its chief engineer and chief of bureau. Other bureaus as they practically exist at present, the heads of which are independent of the secretary, were established in the same way. A great deal of friction occurred between the various branches of the service of the navy department in consequence, some of the evil effects of which continue to the present time.

Nothing was built by the government, although the Secretary of the Navy had full power to do practically as he pleased with the appropriations, which were made in bulk, permitting him to give vessels out by private contract or to build them in the navy yards.

It is true that a few vessels of wood involving antique ideas were started in the navy yards. The engines were contracted for by the various engine builders of the United States, being constructed practically on one general design.

On account of some irregularities and misunderstandings in the way of giving out contracts and certain favoritisms, together with the jealousies and bickerings of the various heads of the

departments and officers of the navy, Congress became more and more exacting in their appropriations, until at last nothing was done in the navy department without a special appropriation by Congress. Of course this did not produce the best results, but as good as could be attained under this arrangement of multiple heads.

Finally some of the best and most prominent officers of the navy determined that something should be done toward creating a new navy; for a long time nothing was done, but at last an advance was reached in the appointment of the *first* naval advisory board.

This, while it was an advance, because it looked like doing something, had the great defect of being too large in numbers, too heterogeneous in its make-up, consisting of prominent officers selected from the line, prominent constructors and prominent engineers, line officers who were said to be prominent as to their knowledge of ordnance, and others who were prominent in other specialties. When they began to discuss and formulate their plans, the character of the commission resulted in the adoption of a mixed product, not homogeneous whole; while but little was done in the way of new constructions, they prepared the way for the ships that were built afterward.

Congress having failed to adopt their conclusions, their work soon ended.

A second naval advisory board designed the first modern warships of our navy, the cruisers "Chicago," "Boston," and "Atlanta," and the gunboat "Dolphin." This was appointed by Secretary Chandler. These vessels were built under the following administration of Secretary Whitney, when the cruisers "Baltimore," "Philadelphia," and "Newark," and the gunboat "Yorktown," and battleships "Texas" and "Maine" were turned out. Under Mr. Tracy's administration the first armored cruiser, the "New York," and the first modern battleships, "Indiana," "Massachusetts," and "Oregon," were added.

Since that time ideas of types of vessels have varied as the organization of bureaus has changed, and with a leaning toward what was done abroad. The trend of expert opinion has been of late toward the battleship type and heavy ordnance, limiting the displacement to echoing that of some foreign government. The limit in dimensions here had already been fixed two or three times: first 10,000 tons displacement, then 14,500, and now,

October, 1905, the general board of navy department has recommended 18,000 tons displacement, and to carry ten 12-inch rifles. According to a recent report from Washington, it is stated that:

"Recent battleship construction in our navy has represented a steady progression of the intermediate battery, from 5-inch quick-firing rifles to 6-inch on the 'Wisconsin' class, and even 7-inch on some of the later ships.

"This progression has reached the limit of its development. The next step involves a radical innovation. It is nothing less than the abolition of the intermediate battery and the putting of the weight thus saved into the fighting strength of the ship. This will be accomplished by increasing as far as possible the number of 12-inch guns in the main battery, and dropping the secondary battery to 3-inch rifles as the largest."

There has been considerable opposition to the 18,000-ton ship, but the board has undoubtedly been influenced to adopt this displacement, as the British are now building ships of a similar type. The Cincinnati Times-Star, in referring to large battleships, says:

"An 18,000-ton battleship would be a monster. It is undeniably true that the ship of the fighting line is still the controller of the destiny of the seas. Is there not a strong chance, however, that when so much power and so much expense are concentrated in one hull, a mistake in judgment that may prove costly in actual war is being made?"

The warship as it exists to-day is practically the embodiment of the experiences and ability of Sir William White. His personality is conspicuous in warship construction everywhere, notwithstanding the fantastic form of the upper works introduced by the French in some of their ships. It is due more to him than to any other person that the British model, design and methods prevail in all the navies of the world.

ILLUSTRATORS OF DANTE.

BY CARROLL SMYTH.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
November 2d, 1905.)*

In Dante's biography the frontispiece is his portrait by his contemporary and friend Giotto. This portrait was painted in the fresco of "Paradise" on the wall of the Bargello Chapel at Florence. During the plague in 1630 the walls of the Chapel were covered with whitewash. In 1840 the whitewash was removed and the portrait uncovered amid civic rejoicings. Before its restoration by Marini, the English artist, Seymour Kirkup, was able to make a colored drawing of the original, which has been reproduced in the Arundel Society's chromolithograph.

This portrait, which was probably painted between 1332 and 1337, had a dominant influence on subsequent representations of Dante. The miniature in the manuscript of the Riccardi Library and the Naples bust represent the poet at maturity; but if allowance be made for the stress of the intervening period, their affinity to Giotto's portrait of the young Dante becomes evident. The so-called death-mask of Dante has no authenticity.

While many frescos of Giotto and the Siennese School are suggestive of Dante, they are not direct illustrations of his works; for artists and poet have alike found inspiration in the great religious movement inaugurated by St. Francis of Assisi. The first direct illustration of Dante is the fresco of "Hell" in the Strozzi Chapel of Santa Maria Novella, Florence, by Orcagna, which was painted before 1357.

A century later comes Botticelli, who was born in 1447, a single year after Lorenzo de Medici. For a Medici patron he made 101 full-page drawings—one for each canto and a frontispiece—in a folio Codex of the *Divina Commedia*. The Codex belongs to the Königliche Museum of Berlin; but sixteen leaves are missing, eight of which have been discovered in the Vatican Library. Photolithographs of the extant drawings have been issued by Dr. F. Lippmann, of the Museum.

These drawings enable us to see Dante's creations with mediæval eyes. Cerberus, for example, has a central human head flanked by dogs' heads. The drawings date from 1481, in which year twenty of them were engraved for Landino's edition of the *Divina Commedia*. This date marks the transition from the illuminated manuscript to the book illustrated by prints.

Manuscript illustration began with colored initials and borders. The initial became the framework for a miniature, which encroached upon the page, and sometimes occupied all of it. The printing-press drove out not only the scribe but the *miniature*. The editions of the *Divina Commedia* printed at Venice from 1491 to 1544 are illustrated by quaint woodcuts. The designs show progression from mediæval to Renaissance forms.

About 1500, Signorelli, whom Symonds calls "The Morning Star of Michelangelo," decorated the Chapel of San Brizio in the Cathedral of Orvieto with such subjects as "The Resurrection of the Body," "Hell," and "Paradise." Below these frescos are portraits of Dante and the classical poets. The portrait of Dante is surrounded with medallions representing episodes chosen from the *Purgatorio*.

Raphael twice painted Dante in the frescos of the *Stanze* or State Apartments of the Vatican: in the *Parnaso*, among the classical poets; in the *Disputa*, among the Doctors of the Church. The mosaic of "Theology," from Raphael's cartoon, follows Dante's description of Beatrice (*Purgatorio*, Canto XXX).

But Michelangelo is the true spiritual son of Dante, conspicuously in the frescos of the Sistine Chapel (the Last Judgment pictures—Charon ferrying souls across the Acheron to the tribunal of Minos, Judge of Hell).

After Michelangelo came a long period of apathy toward Dante, at length terminated by the romantic movement of the nineteenth century. Throughout this century art has done homage to the *divino poeta*. In Italy the foremost illustrators have been Fabris, Bigioli, and Scaramuzza; in France, Delacroix, Ary Scheffer, and preëminently Doré; in England, Flaxman and Blake for the *Divina Commedia*, and Rossetti for the *Vita Nuova*. To the translation and illustration of the latter work, this pre-Raphaelite painter and poet devoted his life; his greatest picture, *Dante's Dream*, is in the Walker Gallery at Liverpool. In Germany the leader of the art movement at Munich was Cornelius,

whose fresco of "Paradise" in the Villa Massimi, Rome (1816), deserves a place beside the Italian masterpieces. Koch, Preller, Begas, and Rethel are among the illustrators of the *Divina Commedia* in the collection of King John of Saxony, better known to students of Dante by his pseudonym Philalethes. The collection has been donated to the Königliche Secundogenitur in Dresden.

America has richly contributed to Dante literature in the translations and studies of Longfellow, Lowell, and Norton; but the American illustrator of Dante has not yet appeared.

MAXWELL SOMMERVILLE.

AN OBITUARY ADDRESS BY INMAN HORNER, HISTORIOGRAPHER OF
THE SOCIETY.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
December 7th, 1905.)*

Maxwell Sommerville was born April 1st, 1829, at Clarksburg, Virginia; his father, of the same name, was a doctor of medicine.

At the home of his maternal ancestor, James McAlpin, he was afforded the opportunity of seeing Greek statuary, which no doubt gave the first impulse to the development of that classic taste which controlled to such an extent his later life.

He was educated at the Philadelphia High School, and his early manhood was probably devoted to typography and its kindred branches, his office being for many years in the building of the Aldine Press, Philadelphia.

At the outbreak of the Civil War he enlisted as a member of the Commonwealth Artillery (a city organization), responding to the first call for troops. The battery was stationed during its three months' service at Fort Delaware, then partly completed.

The Centennial Exhibition, held in Philadelphia in 1876, created a very great interest in all kinds of plastic art, and as a result a number of highly educated people came together for the purpose of making *stated* exhibits of objects of art of the minor class. Out of these informal gatherings arose the Social Art Club (later re-named The Rittenhouse Club), devoted to the purpose above indicated. Mr. Sommerville was prominently identified with this movement, and from 1875, the date of the organization of the club, until the time of his decease, was one of its honored members.

At about this period Mr. Sommerville began to collect engraved gems, and the collection had attained considerable importance in the decade of 1880 to 1890; for some time it was deposited in the Memorial Hall Museum, subsequently, for a year or two, at the Metropolitan Museum in New York City; finally, in the year 1894,

it was brought to the library of the University of Pennsylvania, where it remained until the opening of the new University Museum in December, 1899. A special room was assigned to it in this building and a formal donation of the collection was made by Mr. Sommerville to the Trustees of the University, the donor being made the first occupant of the newly established chair of Glyptology.

There can be no question of the great value of the collection as a whole, although at times there has been doubt cast upon the genuineness of some of the specimens; nevertheless, it is a noble gift and one which is greatly appreciated by Philadelphians, and the donation is a permanent testimonial to Professor Sommerville's zeal and activity in the cause of art as well as in the enrichment of the archæological department of the University of Pennsylvania.

Professor Sommerville recognized his appointment to the chair of Glyptology as imposing responsible duties, and whenever in Philadelphia had great pleasure in lecturing semi-weekly in the most enjoyable and agreeable manner on his own and other collections.

He also fitted up, entirely at his own expense, a section of the archæological museum of the University of Pennsylvania in the form of a Buddhist temple, filling it with a large and carefully selected collection of objects from India, as used in the native place of worship, and robed in the habit of a Buddhist priest, Professor Sommerville illustrated on many occasions the worship of the great Sakya Muni. His travels and purchases, both in gems and Buddhist relics, were continued through many years, until the time of his decease; he also published a number of books bearing on these subjects.

His first wife was a daughter of the late Charles Sherman, who was largely interested in the publishing plant above referred to.

His second wife, to whom he was married about ten years, survived him but a few months. He died (leaving no near relatives) at the Hotel du Louvre, in the City of Paris, on May 8th, 1904, in the 76th year of his age. By his will, the Numismatic and Antiquarian Society, of which he was vice-president for many years, was made the recipient of a generous bequest.



Charles Townley fecit

Hogarth

*From an Original Portrait begun by Westmacott
And finished by Himself.*

Late in the Possession of the Rev. W. Townley

Engraved according to Act of Parliament June 1781 and Added to P. Townley's Catalogue of his Library

WILLIAM HOGARTH.

The print published herewith is a reduced facsimile of a rare mezzotint engraving by Charles Townley from an original portrait of William Hogarth, begun by Weltdon and finished by Hogarth himself.

BY JOHN F. LEWIS.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
December 7th, 1905)*

Mr. John F. Lewis read a paper upon William Hogarth and his prints. The paper was illustrated by lantern slides which had been prepared from special states of the plates in the British Museum and also by an exhibition of original prints by Hogarth.

Mr. Lewis said that of all the prints he had ever seen, none had afforded him greater entertainment and instruction than those of William Hogarth, and the belief that they would do the same for the members of the society had prompted him to select the prints as the subject of his paper. He said:

Hogarth was the greatest pictorial satirist England ever produced. His influence upon his time was never equaled by any of his contemporaries, and among the multitude of his successors, none could rival it or match his marvelous power. Perhaps no English artist or engraver has a more extensive bibliography. His commentators and expounders are legion. Volume has followed volume in the effort to throw light upon his work, but his motives and intentions are still more or less hidden behind fascinating obscurity. The Rev. Dr. Trusler, George Steevens, John Nichols, John Ireland and Horace Walpole, have all written him up and published their studies. Charles Lamb, William Hazlitt and William M. Thackeray have followed in their footsteps, and more recently George Augustus Sala and Austin Dobson. At least one hundred books and pamphlets have been published concerning him, and it is indeed difficult to write anything new about him. Nevertheless he was better known to our grandparents than he is to us, and among otherwise well read people now, there is much ignorance concerning his life and labors, and an unaccountable want of appreciation for his extraordinary genius.

According to the records of Great St. Bartholomew's, West Smithfield, London, he was born November 10th, 1697, the son of a provincial schoolmaster, whose chief work in life

was the compilation of a Latin dictionary which was never published.

In his autobiography, Hogarth writes:

"My father's pen, like that of many other authors, did not enable him to do more than put me in a way of shifting for myself. As I had naturally a good eye, and a fondness for drawing, shows of all sorts gave me uncommon pleasure when an infant, and mimicry, common to all children, was remarkable in me. An early access to a neighboring painter, drew my attention from play, and I was, at every possible opportunity, employed in making drawings. I picked up an acquaintance of the same turn, and soon learnt to draw the alphabet with great correctness. My exercises when at school were more remarkable for the ornaments which adorned them than for the exercise itself. In the former I soon found that blockheads with better memories could much surpass me, but for the latter I was particularly distinguished."

He further writes that, very much to his wishes, he was taken from school and apprenticed to a silver plate engraver, but that he soon found this business too limited, and at twenty years of age his utmost ambition was to be an engraver on copper; that as soon as he became master of his own time he determined to qualify himself as such, and that he readily got employment engraving frontispieces for books and illustrations for the text.

"But the tribe of booksellers," he writes, "remained as my father had left them, when he died about five years before this time, which was of an illness occasioned by the treatment he met with from this set of people, partly by disappointment from great men's promises; so that I doubly felt this usage, which put me upon publishing on my own account. But here again I had to encounter a monopoly of printsellers, equally mean, and destructive to the ingenios; for the first plate I published . . . had no sooner begun to take a run, than I found copies of it in the print shops, vending at half price, while the original prints were returned to me again; and I was thus obliged to sell the plate for whatever these pirates pleased to give me, as there was no place of sale but at their shops.

"Owing to this and other circumstances, by engraving until I was near thirty, I could do little more than maintain myself; but even then I was a punctual paymaster."

Hogarth became ambitious to paint, and began to attend an

art school opened by Sir James Thornhill in Covent Garden, so that he might *take the life* to correct his memory. In 1727 he ran away with Sir James's only daughter, Jane, and married her. She was between nineteen and twenty and must have been a great beauty, and while Lady Thornhill encouraged the alliance, Sir James, as might be gathered from its nature, was thoroughly averse to it. Hogarth was thrown entirely upon his own resources, and during the next five years, between 1726 and 1732, though he painted much, yet he continued to use the graver whenever opportunity arose, in order to eke out the scanty income his brush afforded.

His twelve large prints for *Hudibras* were published in 1726. They were issued, stitched, with the following title page: "Twelve Excellent and Most Diverting Prints, taken from the Celebrated Poem of Hudibras, Wrote by Mr. Samuel Butler, Exposing the Villany and Hypocrisy of These Times, *Invented* and Engraved on Twelve Copper Plates, by William Hogarth."

They followed a set of sixteen small prints prepared for an edition of *Hudibras* printed in the same year, and by which John Ireland says Hogarth "first became known in his profession." The small prints were largely *copies* from a series published some years before, but the large prints are infinitely superior, and display unmistakable traces of his *original* genius.

Mr. Lewis then exhibited lantern slides made from the set above named, and from other original prints.

He stated that the first print of importance which revealed Hogarth's tendency to satire, was one entitled "Taste," published in 1731, which shows the gate of Burlington House surmounted by the erect figure of William Kent, a fashionable but overrated artist of the time, supported by reclining statues of Raphael and Michelangelo. The print, Mr. Lewis stated, had been suppressed and was now exceedingly scarce, but that he was fortunate in being able to exhibit an original to the society.

Mr. Lewis then showed the famous series of "A Harlot's Progress" and commented thereon; the "Midnight Modern Conversation;" and all of Hogarth's most important works. His paper consisted of a running commentary upon the prints, as the illustrations were exhibited to the society.

In conclusion he said Hogarth had a more or less irascible temper, but a countenance beaming with wit and humor. He hated shams of all sorts, and his designs are glaringly truthful.

Of Hogarth's life, apart from his work, little need be said. His only romantic episode was running away with Thornhill's pretty daughter, but this resolved itself into an old-fashioned and sensible marriage. He lived in Leicester Fields, at the sign of the "Painter's Head," which he had carved himself out of corkwood and gilded, and died there October 26, 1764, in competence and honor.

He possessed a sanguine temperament, great power of will, entire self-reliance, and unflagging industry, and for these reasons, though starting his art career relatively late, was able to accomplish so much. He was an outspoken man, with a pencil as unbridled as his tongue, and though his work exhibits the coarseness of his age, it never shows its vice, except to ridicule and repress it. The "Harlot's Progress," his first great work, which well exemplifies all of it, was painted immediately after his marriage and in the presence of a young, beautiful and virtuous wife, who read her Bible daily, and loved her husband with ceaseless tenderness, and for whom he reciprocated a like sentiment. His motive is always the promotion of virtue. His work is always pointing a moral. Though we may smile and laugh at it, its scenes sadden as they move, and beginning in mirth we end in sorrow.

Of his genius, Allan Cunningham says:

"That his works are unlike those of other men, is his merit, not his fault. He belonged to no school of art; he was the product of no academy; no man living or dead had any share in forming his mind, or in rendering his hand skillful. He was the spontaneous offspring of the graphic spirit of his country, as native to the heart of England as independence is, and he may be fairly called, in his own work, the first born of her spirit."

He was the intimate friend of David Garrick, and from his polished coppers, part of the brilliancy may be the great actor's reflection. This friendship was lifelong, and upon his tomb at Chiswick, the epitaph is Garrick's:

"Farewell; great Painter of Mankind,
Who reach'd the noblest point of Art;
Whose pictured morals charm the Mind
And through the Eye, correct the Heart.

If genius fire thee, Reader, stay,
If nature touch thee, drop a tear.
If neither move thee, turn away,
For Hogarth's honour'd dust lies here."

AN ACCOUNT OF SOME COINS IN A PRIVATE COLLECTION.

BY JOHN STORY JENKS.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
January 4th, 1906.)*

Coined money was used about 700 B. C. by the Greeks who gave on their coins records of the migrations, the mythology and the manners and state of civilization of this great people. For instance, on a gold coin of the earliest period we find the migration of the Phocæan colony to Asia Minor recorded in an unmistakable manner. Stephen of Byzantium relates that the ships of the Greeks were, on their voyage, followed by an immense number of seals, and it was probably on this account that the city they founded received the name of Phocæa from the Greek name of a seal, and they also adopted a seal as the type or badge of their coinage. Each state or colony had a different object on its coins. Those of Ægina, among the earliest struck, have a tortoise; Athens an owl; Metapontum an ear of wheat; Crotona, a tripod; Rhegium, a lion's head; Tarentum, a boy on a dolphin; Elis, Greece, an eagle carrying a hare, and on the reverse a thunderbolt. An obolus of Agrigentum, the smallest coin they struck, has a bird on one side and a crab on the other, beautifully delineated.

The earliest coins had the design on one side only, the other being incused by a punch, which drove the metal into the die. At first the deities were represented by objects sacred to them: Ceres by an ear of barley, Bacchus by a bunch of grapes, Diana by a stag. At a later period the gods and goddesses themselves were represented by noble heads. The greatest artists among the Greeks were engravers and die sinkers. The Greeks founded colonies all along the shores of the Mediterranean Sea, on the African coast and in Sicily, where the coinage attained a high degree of beauty.

Perhaps the finest coin of this period is the celebrated medal-

lion or decadrachm of Syracuse, having on the obverse a beautiful head of Ceres or Proserpine, by some thought to be Arethusa, surrounded by dolphins. Near Syracuse is a fountain of Aréthusa, who received divine honors from the citizens. The reverse of this coin presents what may be considered one of the masterpieces of die engraving. It is a quadriga, or four-horse chariot, which, though on a small scale, is treated with great breadth. A figure of Victory crowns the driver, and underneath is a complete suit of armor, consisting of a coat of mail, helmet, shield, spear and greaves, the prizes of the victor. The coin records most probably triumphs at the Olympic games, achieved by the citizens of the town issuing the coin.

The question is often asked how the coins of ancient times have come down to us in such perfect condition. It is owing to the fact that they have been buried. There were no safety deposit vaults in those days, and a man receiving payment for land or goods, placed his money in a covered earthen pot and buried it. A wave of war swept over the place, the owner was killed, and there the treasure remained for centuries, until perchance a plowman struck the pot and the coins came to light, as perfect as they came from the mint. These finds occur at the present day all over the old world; oftentimes the coins are all of the same reign. Sometimes, from such discoveries, pieces previously rare have become quite plentiful.

The Grecian coinage was of gold, silver, copper, bronze, and electrum, the latter a compound of gold and silver, composed, according to Pliny, of four-fifths gold and one-fifth silver. To illustrate the coins mentioned I exhibit some pieces. Also a tetradrachm of Alexander the Great of Macedon, having on it the head of Jupiter, just as it left the die; a beautiful one of Perseus, King of Macedon, B. C. 178-168; one of Antiochus VIII., King of Syria, B. C. 121-96; a beautiful gold piece of the Colony of Cyrene, Africa; a bronze of Ptolemaios III., of Egypt, 247-222 B. C.; also a gold daric of Darius I., of Persia, 521-485 B. C.

Here is also a silver coin of Cleopatra and Marc Anthony, which certainly does not show such beauty in the queen's face as would indicate her to be the charmer she was.

The earliest Roman coinage was of bronze, the Æs, with the head of Janus on the one side and the prow of a ship on the other.

The subsequent Roman coins were of silver and gold, and



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14. Campen Siege Piece, 1578. 5. First Bronze of Roman Emperor Vespasian, "Judea Capta." 22. Pine Tree Shilling of Massachusetts. 1652. 9. Spanish-American "Cob" Money. 17. Spanish Half Dollar with Chinese Stamps. 21. England, Newark Siege Half-crown, 1646. 4. Silver Tetradrachm of Alexander the Great. 3. Silver Decadrachm of Syracuse.

attained a high degree of beauty, though not quite equal to those of Greece.

In the Roman Imperial series the portraits are so fine that the original would be recognized if met on the street.

Addison calls the Roman coinage a sort of state gazette, on which all the truly great events of the Empire were periodically published. When we find *Egypta Capta* on coins of Augustus, struck on the conquest of Egypt, *Judea Capta* on those of Vespasian, issued when Judea was finally subjugated, and *Rex Parthia Datus* on the coins of Trajan, when the Roman Emperor gave a King to the Parthians, we would allow the aptness of the term.

As the Roman Empire declined, the coinage also suffered, and those of the later Roman and Byzantine Emperors are very rude. Here is a concavo-convex *solidus* of the Emperor Andronicus I., 1182-1185.

Coming to Britain, we find an ancient British silver and gold coinage, of which I exhibit specimens. Two Roman emperors who reigned only in Britain struck coins there. They were Carausius, 287-293 A. D., and Allectus, 293-296, whose coins I show you. The Anglo-Saxons had coins of silver and copper which, though rude, were superior to that of the early Norman kings of England.

The English coinage, until the reign of Henry III., 1216-1272, was of silver pennies alone; after that gold was coined as well as silver.

The earliest English coin with date 1494, the Tournay groat, was struck for Perkin Warbeck, the Pretender, who claimed to be the Duke of York, son of Edward IV., during the reign of Henry VII.

The first English dated coin of the regular coinage was the shilling of Edward VI., in 1549.

Milled coinage was not introduced until the reign of Elizabeth, and from that period until and during the reign of Charles II, both milled and hammered money was used. The milled money was introduced to prevent the clipping of coins, which was an evil attaining great proportions, though the punishments for it were very severe. About the most interesting period of the English coinage was that of Charles I., who, himself a numismatist, issued coins from many mints and of great varieties. The largest English coin and one of the most interesting, is the silver

20-shillings or pound of Oxford, coined from plate given up by the heads of colleges, to be melted down and coined for the royal cause, in which process perished some of the noblest specimens of the exquisite skill of the earlier silversmiths and goldsmiths. The inscription states that the king would defend the Protestant Religion, the laws and liberties of his subjects, and the privileges of Parliament. During this reign many siege or necessity pieces were struck at different towns which were defended by the King's forces, among them Newark, Pontefract, Carlisle, Scarborough, &c.

The Pontefract coin is of two varieties, one bearing the name of Charles I., and the other that of his son Charles II. (as Colonel John Morris defended the castle for seven weeks after the execution of the King), with the inscription *Dum spiro spero*, "while I live I hope." The most interesting piece of English coinage is the gold piece known as the Juxon medal, of which there is only one specimen known, which was formerly in the celebrated Montagu collection, and is now in the British Museum, where last summer I had the pleasure of seeing it. When Charles I. went to the scaffold, Bishop Juxon attended him, and before administering the last consolations of religion, the King handed to the Bishop, as a parting gift, this piece, which remained in his family for many years.

The coins of Oliver Cromwell are quite rare and very beautiful, executed by the celebrated Thomas Simon.

When Charles II. came to the throne, Peter Blondeau was formally re-engaged to direct the mint, and a competition for engraving the dies was entered into between Thomas Simon and John Roeter of Antwerp, which was unfairly decided in favor of Roeter. Simon afterwards produced the pattern crown, most exquisitely engraved, which is considered quite a model of the art of that or even any period, and very superior to any contemporary work of the class, if we except his own previous work. On the edge of this rare and famous coin, known as the petition crown, is inscribed his petition to the King against the previous unjust decision, which was, of course, unheeded. The petition runs: "Thomas Simon, most humbly prays your Majesty to compare this, his tryal piece, with the Dutch, and if more truly drawn and embossed, more gracefully ordered and more accurately engraved to relieve him." I submit a specimen for your inspection.

Guineas were first so named in Charles II.'s times, being made



Obverse and Reverse.

20. England, Charles I. Silver Pound, 1642. 8. Mexico, 4 Real Piece of Charles and Joanna—First Coinage in America. 23. Franklin Cent, 1787. 2. Silver Tetradrachm of Athens, 300 B. C.

with gold brought from Guinea by the African Company. Those coined from this gold had a small elephant under the King's bust.

The English series of coins were made more interesting by the coins often bearing upon them the source from which the bullion was derived; for instance, on some coins of Queen Anne, under the bust is the word "Vigo," showing the capture of Spanish galleons in that bay by the English fleet.

On some of those of George I., on the obverse, are the letters S. S. C., showing the money came from the South Sea Company. On those of George II., the word "Lima," indicating a capture of bullion from Peru.

Quite curious and interesting is the gun money, issued by James II., in Ireland, when he attempted to recover his kingdom in 1689-90. To obtain a sufficient supply of money, James issued coins nominally of the value of crowns, half-crowns, shillings and sixpences, but they were made of the metal from brass cannon and kitchen utensils of copper and brass. Each coin bore the name of the month during which it was current.

Certain English coins have popularly the credit of being very rare, but are not so. Among them is the Queen Anne farthing, which was issued as a pattern in 1713-14. When George III. came to the throne, the coinage was in bad condition, and silver scarce. The first pieces struck in 1763 are known as Northumberland shillings, of which 100 pounds sterling were coined for the use of the Earl of Northumberland, who was made Lord Lieutenant of Ireland. They were to be distributed amongst the populace when he made his first public appearance in Dublin. During the wars with Napoleon, tradesmen's tokens, both silver and copper, were allowed and issued. Some fifteen hundred varieties of these exist. Also Spanish dollars and half-dollars had impressed in the center of them a small head of King George, and were allowed to pass current.

The English are very set in their ideas, and when, in 1849, the mint issued a florin or 2-shilling piece with the inscription *Victoria Regina*, omitting the words *Dei Gratia*, they called it the Godless florin, and would have none of it.

Some of the European coinages show by their inscriptions the continuance of unfounded claims to sovereignty, long after the substance had ceased. Thus for many reigns, until that of George III., long after the last English possession in France, the town

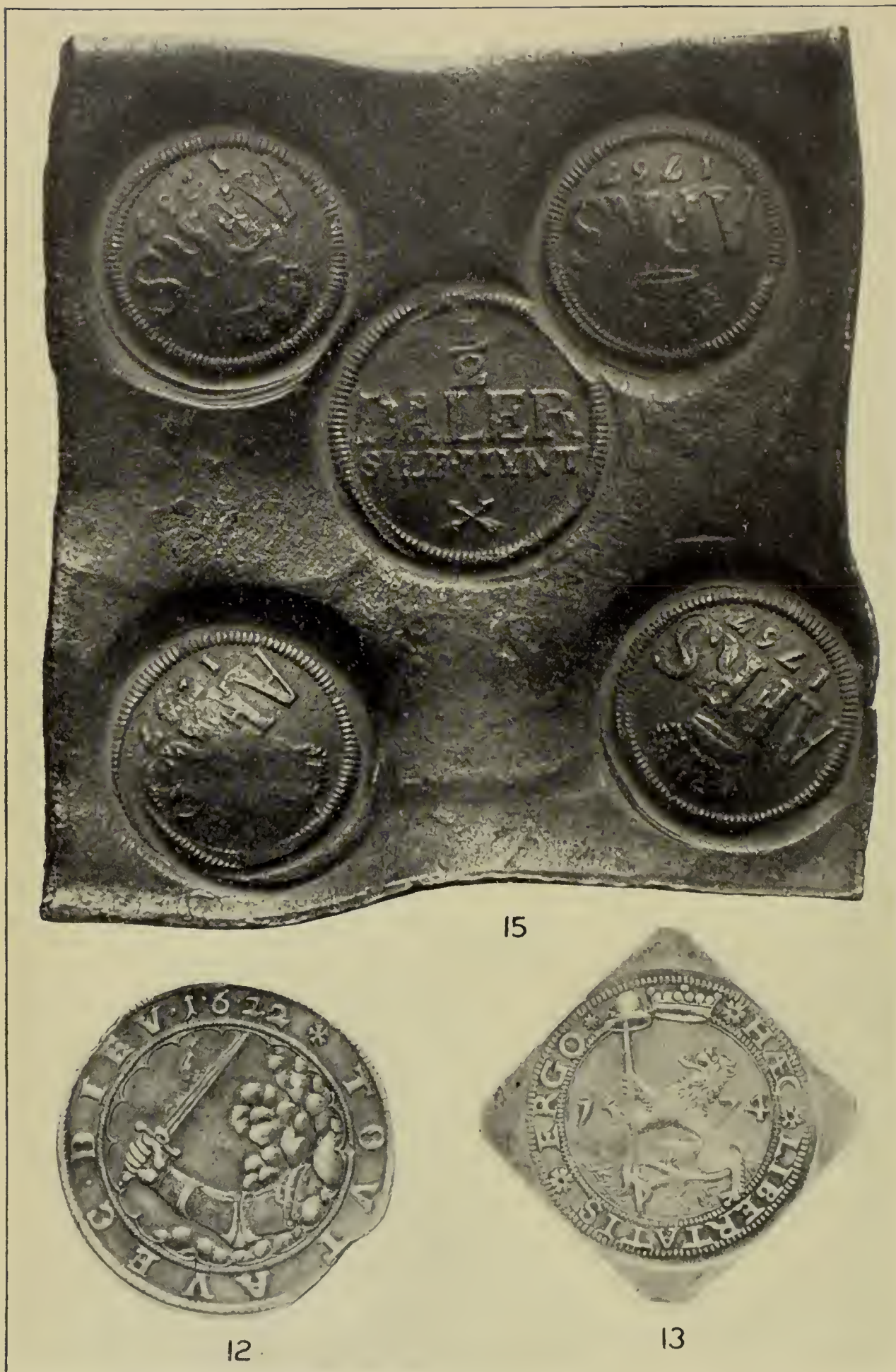
of Calais, had passed from under English rule, they still put on the coins "King of Great Britain, France and Ireland." The kings of Sardinia inscribed on their coins "Kings of Sardinia, Cyprus and Jerusalem," when their actual possessions were confined to the first-named country.

There were quick changes in the coinage in former times, as well as in the present. We have coins of Mary, Queen of Scots, and Henry Darnley, and of Mary alone, and of her infant son, James VI., all dated 1567.

The currency has not been confined to metal alone, for I have here specimens of cowry (*Cypræa moneta*) a small yellowish-white shell with a fine gloss, used by various peoples as money. It is abundant in the Indian Ocean and is collected in the Maldivé and East Indian Islands, in Ceylon, in Siam, and on parts of the African coast. It was used in China as a medium of exchange in primitive times, before the introduction of metallic currency, and also in Bengal, where as late as 1854, 5,120 cowries were reckoned as equal to a rupee. It is still so employed in Africa and in the countries of Farther India. In Siam, 6,400 cowries are equal to about a shilling sixpence, English money.

There are some interesting facts concerning the coinage of Ireland. The earliest Irish coins were the ring money, circles of both gold and silver, of which I present specimens. Later the Irish monarchs coined silver pennies similar to those of England, and the English kings also struck money for Ireland, which was a much baser metal than the contemporary English coins. It is a rather singular fact that the only coins known of King John of England were pennies and half-pennies struck for Ireland, his father having created him Lord of Ireland before he commenced his reign. During the Civil War siege pieces were struck for Inchiquin, and a series of crowns, half-crowns, shillings, sixpences, 4-, 3- and 2-pences, by the Earl of Ormond, and rude pieces for Charles II. The distinctive Irish coinage ceases with the penny and half penny of George IV., in 1822.

When we cross to the continent of Europe we find an almost interminable series of coins, of great variety and many of them very beautiful. This is due to the fact that not only did emperors and kings strike money, but also many bishops and archbishops, princes, counts and dukes, the Hanse towns and many other cities, some of them now unimportant. For instance the town of



15. Swedish Plate Money, 1757. 12. Crown of Christian, Duke of Brunswick-Luneberg, 1622. 13. Leyden Siege Piece, 1574.

Henneberg, in the Duchy of Saxe-Meiningen, a town now containing only five hundred inhabitants, struck a series of crowns in the last decade of the seventeenth century. Many of the crowns have the emperor's bust on one side and the arms and name of the city on the other. The archbishops of Salzburg issued a beautiful series.

The Swedish coinage is interesting in many respects. When Charles XII. succeeded his father, he engaged in wars with his neighbors and soon depleted the treasury. Towards the close of his reign he struck small copper necessity pieces, called dalers, which were to pass current for silver, containing on one side figures of heathen deities, Mercury, Jupiter and others, and on the other side the denomination and date. Finally, the Prime Minister Baron Goertz, placed his own effigy upon the coin, and lost his head in consequence.

During the early part of the eighteenth century the Swedish government struck what is called plate money, large, thick sheets of copper, stamped with the denomination, of which I show you specimens.

Percy Fitzgerald has written a book called *Kings and Queens of an Hour*. Among other celebrities written about is Theodore I. of Corsica. He was a German nobleman, Theodore von Neuhoff, who, while the Corsicans were striving to break the Genoese yoke, landed in Corsica with arms and munitions of war furnished him by the Bey of Tunis and the Porte. He fought bravely and reigned in Corsica from 1736-38, but was finally driven out by the Genoese. After a life of adventure he came to England, where he died in poverty in 1756. He is buried at St. Ann's at Soho, in a mean corner of the burying-ground, among the paupers. Walpole had a monument erected to him near the spot, inscribed "Theodore, King of Corsica, who died in this Parish, December 11th, 1756, immediately after leaving the King's Bench prison by the benefit of an Act of Insolvency, in consequence of which he registered his Kingdom of Corsica for the use of his creditors." Here is a copper coin of his, 5 soldi, dated 1736.

Among the most interesting of the continental coinages are those of the dukes of Brunswick-Luneburg, the ancestors of the present English royal family. They struck the largest coin known, the ten-crown piece, worth nearly twelve dollars in silver, also six, five three, two, one and one-half crowns and crowns. A

double crown here shown, dated 1680, is of Ernest Augustus, Bishop of Osnabruck, Duke of Brunswick and Luneburg. This distinguished general and diplomatist, by his marriage with Sophia, the daughter of the Elector Palatine Frederick V. and granddaughter of James I. of England, obtained a right to the throne of England, and in 1714 his son George Lewis became King of England, under the name of George I. They recorded their quarrels on their coins. For instance, on the crown of Henry Julius, of 1595, there is a wild man holding torch in right hand, tree near it. N. M. T. (*Noli me tangere*—Touch me not); in his left, a dart, D. C. S. E. (*Durum contra stimulos calcitrare*—It is hard to kick against the pricks). Dog lying down. Reverse, Korah, Dathan and Abiram being swallowed up by the earth; in the exergue NVME XVI (Numbers xvi., where their tale is told). Above, N R M A D I E S (*Non recedet malum a domo ingrati et seditiosi*—Evil shall not depart from the house of the wicked and rebellious man).

A crown of 1597, of the same ruler, has on it a lion *couchant*, holding between his forepaws a roebuck, and presenting his hind-quarters to a leafless stick, whence springs a rose symbolical of the family of the von Saldern, the roebuck of the von Steinbergs, the stick of the von Stockheims, with all of whom Julius was at enmity. Above, an angel about to place a wreath on the lion; ins. translated, "At length the Good Cause triumphs; Beware of the open act; lies can be easily dealt with." What is known as the "truth dollar" has the inscription, "Henry Julius By the Grace of God, Bishop Elect of Halberstadt, Duke of Brunswick and Luneberg," *pro Patria consumor* ("I spend lavishly for the country"), also, "In doing right fear no man," and "Truth conquers all calumnies." A crown struck in 1599 has a lion seated, attacked by ten wasps whose nest he has disturbed, the sun shining upon him, eagle above, symbolical of his conquering ten noble families who had rebelled against him. The crown of 1622 of Christian of Halberstadt and Brunswick is known as the celebrated "God's Friend and Priest's Foe crown." In the center is the inscription in Latin, "God's Friend, Priest's Foe;" on the reverse, a mailed arm with sword, issuing from clouds, the inscription in French, "All with God." It was made from silver obtained by melting a solid silver statue of a Gallic saint, named Liborius, which he found in the Cathedral of Halberstadt. On another crown struck after the loss of his

arm he placed an arm holding a sword, and the inscription, "The other remains," *altera restat*.

Here is a curious double crown, struck in the town of Munster by the Anabaptists, in 1534, with the inscription, "He who is not born of water and spirit cannot enter into the Kingdom of God," "A King upright over all," "The word is become flesh and dwells among us." On the reverse, a tablet with an inscription, "Tho. Munster," who was one of the leaders of the Anabaptists, and an inscription, "One Lord, One vow, One baptism."

I now show you a curious little piece struck at the close of the 'Thirty Years' war in Nuremburg by the Imperial Lieutenant-General Octavius Piccolomini, Duke of Amalfi, and distributed to the children of Nuremburg. On one side is a boy riding a hobby horse, with the inscription translated, "Remembrance of Peace in Nuremburg." On the reverse, an eagle with the inscription, "Vivat Ferdinand III., Roman Emperor Vivat." The story is that when Nuremburg was occupied by the imperial forces the children were told that the Emperor's plenipotentiary would distribute money to them, and accordingly they surrounded the palace riding on hobby horses. The Duke, not being prepared for them, asked them to come on the next Sunday. In the meantime he had struck these little square pieces of silver, and when they came threw them amongst them.

The Venetian series of coins is quite interesting and curious from the fact that only during the reign of one Doge was his head placed upon the coins. The Doge was Nicholas Trono, who ruled from 1471 to 1473.

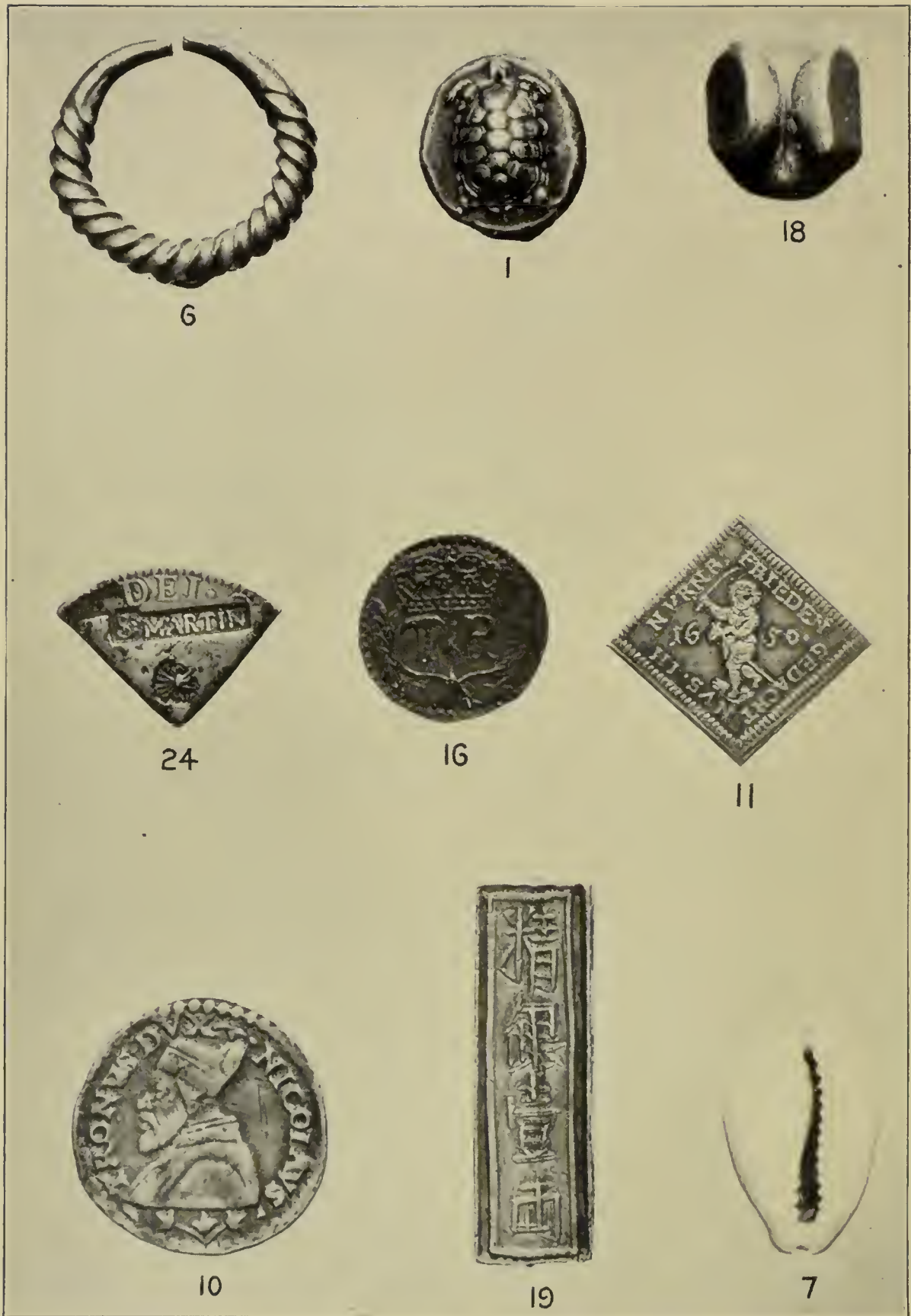
Probably the smallest coin known is the gold one-thirty-second ducat of the city of Ratisbon, 1700. Very curious coins are what is known as bracteate, which were struck in the eleventh and twelfth centuries. They are of excessively thin discs of silver and gold, uniface, many with no inscription, merely the figure of an animal or of saints incused. It is wonderful that such exceedingly delicate pieces should have come down to us. A very early dated coin is that of Maximilian, Archduke of Austria, struck in 1486. When we turn to siege or necessity pieces of the continent of Europe we enter a wide field, for they are very numerous. They consist of pieces struck in gold, silver, copper, lead, tin, and even in leather, paper and vellum. One of the doges of Venice in the twelfth century is said to have issued leather tokens during an expedition in the Levant for

the payment of his fleet. This class of currency was of all forms, often square, and usually of artificial or abnormal values. Gold was seldom employed and some of the siege money in that metal is spurious. The earliest, perhaps, was the gold ducat or florin struck at Vienna in 1529, during the Turkish blockade, with a rough portrait of Ferdinand I. In the long struggle between the people of the Netherlands and their Spanish oppressors, nearly every town was at some time or other besieged during the long war. I exhibit to you necessity pieces of Haarlem, dated 1572; Zieriksee, 1575-76; of Leyden, both paper and silver, struck in 1574, during the celebrated siege; of Groningen, 1577 and 1672; of Brussels, besieged by the Spaniards in 1579-1580; of Friesland, dated 1614, with the pathetic inscription, "Give peace in our days, O Lord!" of Middleburg, dated 1572, struck by the Spaniards when besieged by the patriots, and in 1574 by the Dutch, after capturing the town; of Campen, 1578; Amsterdam, 1578, and during the French invasion, 1673; of Berg-op-Zoom, a metallic double crown after the Spanish siege of 1622; of Breda, 1577 and 1625; of Maestricht in 1579, and when besieged by the French in 1794; of Deventer when besieged by the Bishop of Munster in 1672.

Here is a coin of Copenhagen, Denmark, struck during the siege by the Swedes, in 1659; of Sweden, four marks necessity money of John III., 1571; and of Charles, Duke of Sudermania, after Charles IX. of Sweden, 1603.

This siege piece of the town of Julich, Rhenish Prussia, struck during the siege of Prince Maurice of Nassau, 1610, is from a piece of gilt plate, and this other of the same town was struck in 1621 (when besieged by Henry of Berg), by Frederick Pythian, the governor of the city.

Here is also a siege piece of the city of Breisach, Baden, when it was besieged by the Swedes in 1633; of the city of Strasbourg, struck by John George of Brandenburg during the wars against the Cardinal of Lorraine, in 1592; of the town of Ulm in 1704, when besieged by the Imperialists, with the same prayer, "Give Peace to us, O Lord!" Here are rude pieces struck in the city of Leipsic, under Maurice, Duke of Saxony, in 1547, and of Silesia, dated 1621, and one kreuzer of tin, of the city of Branau, Saxony, when besieged by the Austrians in 1743; of Aire, France, besieged by the Allies, with the arms of the defender, the Marquis de Guebriant, dated 1710.



6. Ancient Gold Ring Money of Ireland. 24. St. Martin's Island, West India, Currency. 10. Silver Coin of Nicholas Trano, Doge of Venice, 1471-73. 1. Silver Drachma of Ægina, 500 B. C. 16. Five Soldi of King Theodor of Corsica, 1736. 19. Cochin China, Bar Money. 18. Siamese Bullet Money. 11. Nuremberg Stick Rider Penny, 1650. 17. Cowry Shell Used as Money in Africa and India.

Here are Spanish siege pieces of Barcelona, 1808; Saragossa, 1809, defended by General Palafox; of Gerona, 1808, struck by Alvarez when besieged by the French; of Lerida, 1809; of Palma, in the Balearic Islands, 1808; and Majorca, 1821. Here is an eighty-reis piece cast from bell metal at Terceira, one of the Azores Islands, during the flight of Maria II. to the islands in 1829, when her uncle, Miguel I., usurped the throne of Portugal; also of Salzburg, struck by Wolfgang Theodore von Raitenau to pay his troops in the war against the Turks, in 1593.

Here is a curious cast silver siege piece of the town of Cattara Dalmatia, struck by the French in 1813, when besieged by the Allies; and of the city of Zara, Dalmatia, struck by the French in 1813, when besieged by the Austrians. Here are coins of Transylvania, struck in the war of Jean Zapolski II. against Maximilian II., in 1565; and of the city of Hermanstadt, Transylvania, struck in the war against the Turks, in 1580; and of Sigismund Bathori, of Transylvania, struck at Cronstadt in 1601; of Bohemia, struck by Frederick V. in 1620, in his war against Austria; and of Landau, Bavaria, besieged by the Imperial troops, in 1702, struck on a piece of plate, showing the edge of the salver; and of the same town in 1713, when besieged by the French and defended by Charles Augustus, Duke of Wurtenburg.

Here is a cast one-sol piece struck in Luxemburg when besieged by the French in 1795; and of Strasbourg in 1814, with "L" on it for Louis XVIII., and another dated 1815, with "N" on it for Napoleon.

An interesting coin of the Low Countries is the triple crown of Brabant, with the heads of Albert and Elizabeth of Austria, dated 1619. The old Spanish silver dollars have always been preferred by the Chinese, and I show you one of them which has, as is usual, a great many Chinese characters upon it, each merchant stamping the coin as it passed through his hands, giving it a species of endorsement, as it were.

Here is a rather curious Siamese piece, known as bullet money, a globule of silver, with an inscription. The sets consists of eight pieces, of which this is the largest. Also Siamese porcelain money and Corean necessity indemnity money. Here also is a specimen of a Portugese coinage for Mozambique, a silver onca of Maria II., struck in 1845; also African ring money of copper, and bar silver money of Cochin, China; and of Java, under the Dutch—a copper bar stamped.

A fine specimen of East Indian native work is the coronation silver medal of the first King of Oude, Ghazi eddin Haider Schah Zeman, 1819-1837.

Russia, during the reign of Nicholas I., in the years 1830 to 1844, struck coins of platinum of the denominations of 12, 6 and 3 roubles, from metal mined in the Ural Mountains. These coins are rare, as the intrinsic value of the platinum for commercial purposes is greater than their face value.

Here is an interesting piece of modern times, the thaler of the free city of Frankfort, with the head of the actress Janauschek on it. The origin of the name thaler lies in the Joachimsthal, near the Hartz Mountains, the mines of which furnished the silver from which the first thalers were struck. A rare Spanish piece is the large 50 reals of Philip IV., 1633. A curious currency was used in the West India Islands in the last century, consisting of Spanish silver dollars cut into pieces of various sizes and stamped with the name of the island.

It would almost seem as if distinctive coinages were at an end, I mean those showing the art of a country. For when, some years ago in Egypt, I asked for the Egyptian mint, they said the coins were struck in Germany, and when, in Athens, I wish to see the Grecian mint, I was told they had none, the coins of Greece being struck in Paris. Our own mint strikes coins for many of the South American republics.

If I have not tired you, I will say something about the coinage of this continent. The first coin of the Western Hemisphere was struck in Mexico, for Charles V. (Charles I. of Spain) and his mother, Joanna, in 1555-1556. Spanish-American mints were established at various points in the Spanish possessions, and most of the Spanish silver was coined there. The pieces bear a mint mark, either a monogram or a couple of letters. M for Mexico, MA (monogram) for Lima, B for Potosi, etc. The first Spanish coins were rude pieces of silver, irregular in shape, and called cob money. The earliest English colonial coins were for the Island of Bermuda, which was discovered by Juan Bermudez, in 1522, and named for him. Sir George Somers, an English captain, landed there in 1610, and they were named the Somers Islands. Numbers of wild hogs were found there, and the thin copper coin struck for the islands has on one side a ship in full sail, on the other a hog, with the inscription, "Somers Islands," and the denomination XII. over the hog. This coin was very rare,

and long sought for by the Numismatic Society's first President, the late Joseph J. Mickley. After many years' search, he procured it, at an expense, if I remember rightly, of about \$300, and counted it the gem of his collection. Of late years, more shillings have come to light, and also sixpences and threepences.

The first coin struck within the limits of the United States was in Massachusetts. It is a rough disc of silver, having on one side near the edge "NE," and on the other the Roman numerals XII. This was followed by the Pine Tree, Oak Tree, and Willow Tree shillings, sixpences, threepences, and twopences, all dated 1652, but really coined for some twenty years. Cecil Calvert, Lord Baltimore, the founder of Maryland, also issued, in 1659, a rare coinage consisting of shillings, sixpences and fourpences. There is also a unique penny of this coinage. A copper piece was struck for South Carolina in 1694, having on one side an elephant, and on the other, "God preserve Carolina and the Lords Proprietors." There are two varieties of this piece. In the one word "Proprietors" is spelled "tors" and in the other "ters." One of the rarest and most curious coins of the colonial period is that known as the Higley or Granby threepence. These pieces are of several varieties, some having on them a deer, others an axe, others three hammers with the inscription, "Value me as you please, I am good copper;" also "I cut my way through." On others is "The value of threepence," "Connecticut"—they bear date 1737-39. The history of these pieces is that a small copper mine was worked near the town of Granby, Conn., and John Higley, a blacksmith of the town, smelted the copper and, currency being scarce, coined it into these rude pieces for the use of his neighbors. The copper in the coins, being a very fine quality, was used by the Boston goldsmiths in alloying their gold, and hence the pieces became excessively rare. At the close of the Revolution, the currency was in a deplorable condition. There had been large issues of paper money, known as Continental money, which had become valueless. The different States—Vermont, Massachusetts, Connecticut, New York, New Jersey—issued copper pennies from 1783 to 1788. A cent, said to have been the design of Benjamin Franklin, was executed and many pieces coined. It bears on one side a sundial with the sun shining upon it, and the words, "Fugio 1787;" in the exergue the words, "Mind your business." On the other side are thirteen rings interlinked, for the thirteen

States, and in the center the words, "United States," surrounding the inscription, "We are one."

I. Chalmers, of Annapolis, a silversmith, issued in 1783 pieces of the denominations of shillings, sixpences and threepences.

Another curious piece is what is known as the Standish Barry, or Baltimore town threepence, dated July 4th, 1791. Of its history nothing is known.

What is known as the Washington cent, with the head of Washington and the words, "Washington, President, 1791," was coined in England and sent to this country.

The first mint of the United States was located in Philadelphia, on the east side of Seventh Street, just below Arch. The first money coined there was from some silver furnished by President Washington and his wife, and the first pieces struck were the disme and half disme, with a female head, said to be a portrait of Martha Washington. There were also several pattern cents of 1792, one known as the silver-center cent, of copper, with a small plug of silver in the center to reduce the weight. Another was known as the Birch cent, the design having been made by the English artist, Thomas Birch, the ancestor of Thomas Birch & Sons, the auctioneers of Philadelphia. He also painted many views of that city and its vicinity.

I believe the first idea of the mint authorities was to have the President's head upon the coin, but this looked too much like royalty and was not allowed. It certainly would have added to the interest of the coinage to have had upon the coins the heads of the Presidents.

The earliest issues of the mint, from 1793 up to 1800, I think equal, and in fact exceed, in beauty those of more recent dates. The coins struck at the different mints of the United States have on them a mint mark consisting of small letters showing the place where struck, namely, O. for New Orleans, S. for San Francisco, D. for Dahlonega, C. for Charlotte, and C. C. for Carson City, Nev. When North Carolina and Georgia were gold-producing States, two German brothers named C. and A. Bechtler, who were assayers, lived in Rutherford, North Carolina. As it took a long time to transport the bullion to the Philadelphia mint, these men assayed the gold and coined pieces of \$5, \$2.50 and \$1 which circulated in the country. They are dated 1834, though some are without date, but of that period.

When California became a gold producer, an assay office was

established at San Francisco, which assayed and coined the gold brought in by the miners. The largest pieces struck were known as slugs. They are \$50 pieces, mostly octagonal in shape. Private bankers of San Francisco and Oregon issued gold coins very nearly resembling the regular currency. Some of these issues are very rare.

The Mormons at Salt Lake City also issued gold pieces of the denominations of \$5, \$10 and \$20, in 1849, 1850 and 1860. Gold pieces were also issued in Denver, in 1860-1861, coined from Pike's Peak gold. A recent Act of Congress has forbidden the coinage of any of these private pieces. The rarest United States coins are the silver dollar of 1804, the half dime of 1802, and the quarter dollars of 1823 and 1827; also some dates of the gold issues.

In conclusion I would say that I think the hobby of coin collecting is interesting and also instructive to any young girl or boy. If properly carried on, it teaches them geography, in locating the country from which the coin comes; history, in getting the dates when the different rulers reigned; and language, in translating the inscriptions on the coins. The study of coins has added a good deal to historical knowledge; for instance, a line of Greek Bactrian kings are only known from the discovery of their coins, thus restoring a lost history.

ADMINISTRATIVE RECORDS OF THE TEMPLE OF BEL AT NIPPUR.

BY DR. A. T. CLAY.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
February 1st, 1906.)*

Every Babylon city had its temple. Excavations in the different centers have revealed records which were kept in connection with the administration of these temples. While this class of documents throws little light upon questions of historical importance, they enable us to ascertain how the temples were supported and conducted, besides other details of a philological or linguistic character.

During the excavations of the University of Pennsylvania at Nippur, conducted by Dr. J. P. Peters, in 1889-90, and by Dr. J. H. Haynes, 1893-96, more than eighteen thousand tablets and fragments of tablets of this general character were discovered. The latter found some of the tablets in the very position in which they were left when the building was destroyed, some of which were reclining against each other like a shelf of leaning books in an ill-kept library of to-day. The tablets, which are dated, show that they belong to the Cassite dynasty.

During the greater portion of the second millennium before Christ, a foreign dynasty ruled over Babylonia, known as the Cassites. Whence these rulers came is not known. Some identify them with the Kissians, while others hold that their native land was north of Elam. The temple at Nippur seems to have received special attention from these Cassite kings, notably Kuri-Galzu, Kadashman-Turgu and Rammân-shum-usur. The documents from the temple archives were written in the reigns of Burna-Buriash II., Kuri-Galzu II., Nazi-Maruttash, Kadashman-Turgu, Kadashman-Bêl II., Kudur-Bêl, Shagarakti-shuriash and Bitiliash. The names of some of these rulers have a Cassite element compounded with a Babylonian god; *e. g.*, Kadashman-Bêl, while others are entirely Cassite, as Kuri-Galzu.

The records are receipts of taxes or rents from outlying dis-

tracts about Nippur, of commercial transactions conducted with this property, and the payments of salaries of the storehouse officials, as well as of the priests and others in the temple service. In other words, they refer to the handling and disposition of the revenues after they had been collected for the temple.

The tax *gish-bar* was designated as the "full (*gal*) tax," "salary (*ku-qar*) tax," "wage (*she-ba*) tax," "*tab-ki* tax," "5 *qa*" to "10 *qa*," and once "12 *qa*" tax. Doubtless the 10 *qa* was the full tax, which was paid by those enjoying arable lands, while the smaller amount, 4 *qa*, etc., was paid by those who possessed fallow lands or were less prosperous. The tax was very probably according to the income of the individual, *i. e.* 4 *qa* per *gur* (180 *qa*) that was harvested.

The purpose of the tithe or tax, as mentioned in several documents, was for the payment of salaries of priests, temple officials, servants, and those in charge of the temple storehouses, as well as for general expenses.

The revenues were received from quite a number of towns belonging to the environs of Nippur. After the taxes were collected they were brought to Nippur, or if the town had a storehouse, they were deposited in it until needed. Several storehouses were located in Nippur.

The following inscriptions illustrate the general character of these temple archives.

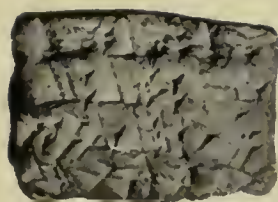
Grain, full tax, which *Khunnubu* brought from the city Kalbiia: 33 *gur* 150 *qa* from Bît-Marduk-nishu; 33 *gur* 150 *qa* from Bît-Gimillum; Total, 67 *gur* 120 *qa* from the month Shebat unto Adar.

This is a record of incoming taxes from several estates which mentions the agent.

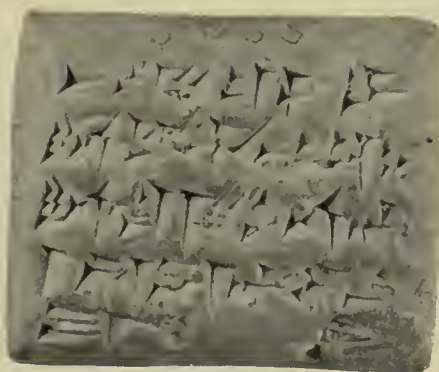
The following records a loan made from the stores collected with the stipulation that the same shall be paid at a certain time: 1 *gur* of grain of the full tax in *shapiltu* on interest, from the storehouse, to be paid by Burra-Ishtar, son of Ushbi-Sakh. On the day of his harvest the grain, and its interest he shall pay. Before Sin-issakhra (witness). Before Rammân-êrish (witness) the measurer. (Date). Thumb-mark of Burra-Ishtar.

It is well known that the temple made loans to the people, but it was not known heretofore that interest was exacted by the temple.

The following illustrates those regarded as simple receipts, a



Record of a Payment.



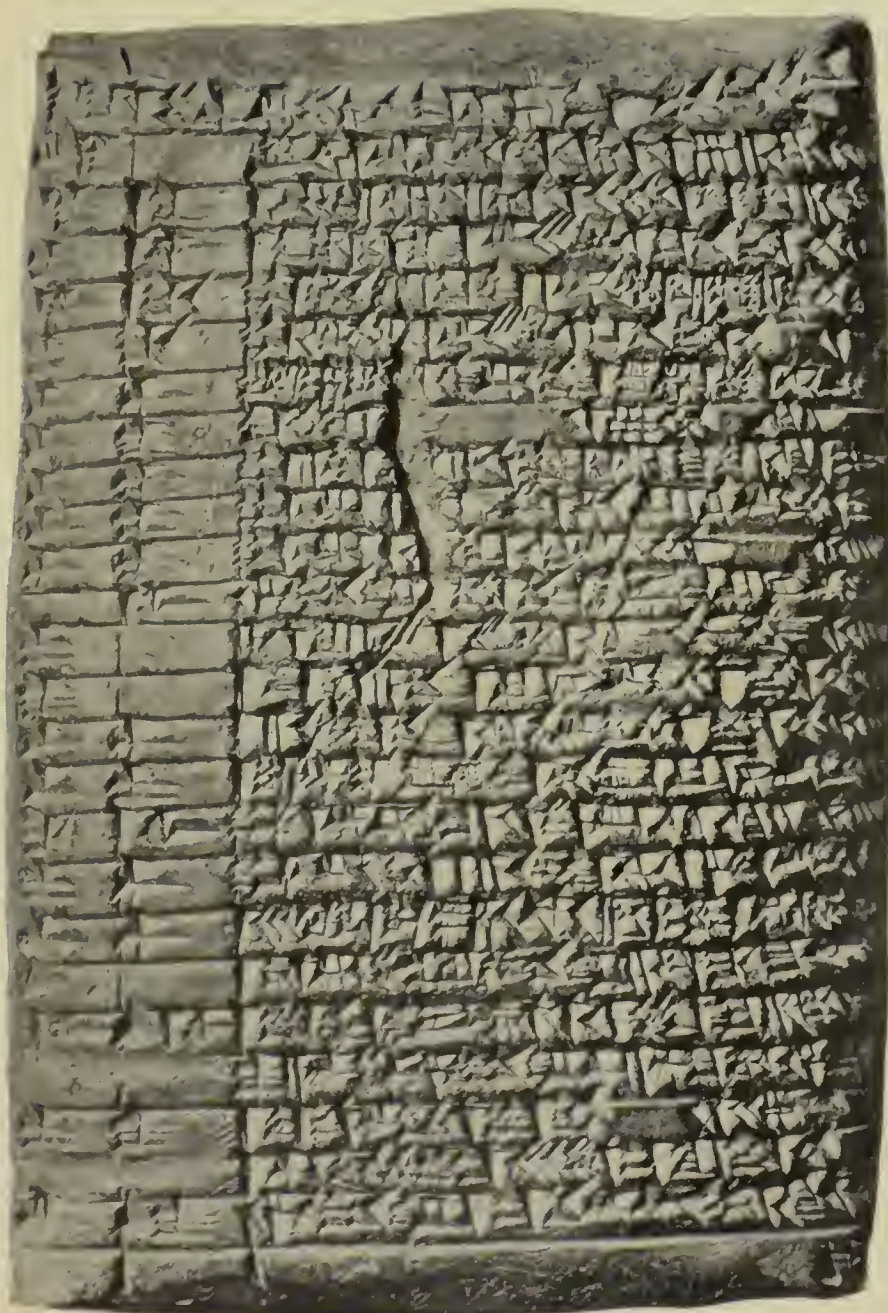
A Receipt.



Record of a Payment.



Payment of Stipends to Temple Officials for Seven Months.



Payment of Temple Stipends.

great many of which are records of salaries paid: "Maintenance seed of the full tax, Bubbu the riqqu officer has received from Innannu (Date)." Innannu was the head official of the storehouse during the reign of Kuri-Galzu II. Names of others who followed him in this position become well known through the documents.

The great bulk of these archives are receipts of amounts paid to the temple officials and servants in salaries. There are, however, quite a number which record payments for supplies, or for work that was done. There seems to have been a whole host of tradesmen and functionaries in connection with the temple. Besides the priests, elder, seer, seeress, sorcerer, singer, etc., there were the farmer, weaver, miller, carpenter, smith, butcher, baker, porter, overseer, scribe, measurer, watchman. Among the tablets are two payrolls of the same group of officials, the one having been written two years after the other. In the meanwhile one official's salary had been reduced, and another's increased; one man had died; and a man was replaced by a woman at the same salary.

These documents show how carefully the administrative affairs of the temple were conducted. The fact is that the temple was provided for and maintained along lines quite similar to modern institutions.

Dr. Morris Jastrow, Jr.'s, comments on the above:

Dr. Jastrow emphasized in his remarks upon the paper of the evening, the importance of the publication announced by Professor Clay. While we now have quite extensive publications covering business documents and temple records of the oldest period as yet known of Babylonian history, *i. e.*, circa 3,000 B. C., and also a large number of similar texts from the later Assyrian and Neo-Babylonian period (900-300 B. C.), and several thousand contract tablets of the Hammurabi period (2300-1900 B. C.), the five hundred years roughly speaking (1750-1207 B. C.), during which the Cassites exercised control in the Euphrates Valley, are as yet not represented.

Dr. Clay's volume of texts covering this important period will therefore prove to be a contribution of great value. It will throw light upon the temple administration during the period of the Cassites, and also add to our knowledge of legal institutions and social life during that time.

Professor Jastrow spoke of the admirable copies of texts that

have been made by Professor Clay in previous publications, and from specimens that he had seen of the forthcoming one, he felt that it was safe to say that Dr. Clay is now to be regarded as one of the best copyists of cuneiform texts at present living, and it is earnestly to be hoped in the interests of science that every opportunity will be given to him to continue the important work of copying and publishing texts, on which he has been engaged during the past decade.

Dr. Jastrow spoke of the interesting historical problems suggested by the appearance of the Cassites in Babylonia. They undoubtedly came from the east, or more specifically the northeast—the mountainous region to the north of ancient Persia or Elam. That the Cassites and Elamites are in some way connected seems now to be quite certain, and the recent excavations conducted by the French at Susa have shown that the history of Elam is quite as ancient as that of Babylonia. In fact, as far back as we can trace the history of Babylonia, it always had as a rival, Elam, and at various periods in its history the Euphrates Valley was overrun by this eastern enemy. The Cassite movement represents, therefore, one of these waves of conquest from the east, and it seems likely that before they entered Babylonia these Cassites had planted themselves firmly in Elam and absorbed the culture of that country. They were certainly not barbarians when they reached the Euphrates Valley, as is indicated by the handsome monuments which they erected, many of which have now been recovered through the excavations at Susa. Besides inscriptions in the later Elamitic language, these excavations have also presented a new problem for scholars through the discovery of tablets with a script quite different from that used in later times, and written in a language that appears to represent an older form of Elamitic. The first attempt at deciphering these new inscriptions has been made by the distinguished Professor Scheil of Paris, but some years will elapse before our knowledge will be sufficiently advanced to enable us to determine in what relationship, if any, this older Elamitic stands to the language of the Cassites.

SIXTY YEARS OF SHIPBUILDING ON THE DELAWARE.

BY CHARLES H. CRAMP.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
April 5th, 1906.)*

Vast changes in the fields of commerce and shipbuilding have taken place in the last sixty years.

The first twenty-five years of my career in the duties pertaining to my profession, beginning in 1846, witnessed the great transition in the art of shipbuilding consequent upon the introduction of steam propulsion and the substitution of iron in place of wood as a material in the making of hulls.

The shipbuilder's art in America had then arrived at a state of excellence never before attained in the world, and ship-owning had reached the most flourishing stage in its history.

It was just about this time that the great clipper ship began its career in the Eastern trade, the scope of which was augmented to a vast degree by the discovery of gold in California a few years later. The great transatlantic packet ships had already become established, stimulated by the Irish famine and the beginning of transatlantic travel.

The clipper and packet ships of that time had no equals in the world's trade for speed, seaworthiness and general grade of construction. The term "merchant princes" as applied to the owners of these vessels was quite *apropos*—they were fully conscious of the importance that the name conveyed and they asserted it on all occasions.

The captains of these ships assumed a dignity and pompous manner which marked them as the most important *habitués* of the maritime districts of the great commercial cities on the Atlantic coast, and their preëminence over the rest of mankind was never questioned there. They were a handsome set of men, and when in port were well dressed, and often pretentious as well as dictatorial in their speech and conduct.

There was one person, however, who, while looking on these

two parties with amiable and condescending spirit as to the usefulness and necessity of their existence, firmly believed that he and his occupation were of paramount importance—he not only felt and looked it, but he was the “master builder” in reality.

The preëminence of the master builder had prevailed in the Levant from the very earliest times. The war galleys of the ancients were a principal factor in the development and continued existence of their power, and the maker of the galleys naturally became a person of commanding influence. An idea of his standing can be had from the fact that special laws were enacted in his behalf—he could be arrested only by a captain of cavalry and one hundred men. His peremptory and dictatorial manner was due to the fact that he not only knew more than anyone else as to his profession, but that he was supremely conscious of it. That he was born to his art was indispensable, for no education can make a great shipbuilder.

The acquisition of great wealth never appealed to him, and no master builder was ever known to have accumulated a fortune; to excel in his profession and to enjoy the pleasurable consciousness of having performed a great work was the prevailing idea that dominated his mind.

Mr. William H. Webb, the most noted of American shipbuilders, accumulated a fortune as a ship owner, but not as a shipbuilder. He was connected with most of the steamship lines that had their origin in the demands of trade consequent upon the discovery of gold in California. The most noted ship in that trade was the “Golden Gate,” built by him at the time.

Certain New England builders acquired ownership in some of the ships they turned out, with a fair success in a pecuniary sense. These cases cannot be considered exceptions to the rule or to my statement that no master builder ever acquired a fortune in the pursuance of his profession.

There was a sort of hypnotic influence or fascination connected with the building of ships that in different ways captivated most that came within the scope of its allurements. Some idea of this may be had from certain facts of recent date in connection with our business.

Several parties who had been successful in some of the late financial enterprises established several shipyards, impelled by what some called the “fascinations connected with the building of battleships,” and others to satisfy a sort of craving for “doing

something, creating something," etc., that their previous financial success had not secured and which left them with the feeling that there was something lacking and unfinished in their career.

Whether their anticipations have been realized I am unable to state, but I do not think that they can consider themselves as belonging to the great cult of the shipbuilding art.

A somewhat similar state of affairs existed at the end of our Civil War. A number of parties, not shipbuilders, who had acquired considerable wealth in contracts for ship work at high prices, considering that their success, as far as profits were concerned, was due to their superiority over other men, and as shipbuilding was "easy" according to their way of thinking, went into it; and all came to grief.

The shipwright in Philadelphia emulated the master builder in his peculiarities; while not so picturesque, the shipwright was just as exclusive, as proud and self-conscious as his superior, the master builder. They were both typical Philadelphians, when it came to pride in occupation, their views as to its social status, and the value of pedigree. But the master himself regarded his occupation as far above all others.

An incident in my experience will indicate the general disposition and character of the master builder. When about to leave the Central High School in 1846, at sixteen years of age, I visited my uncle, John Birely, a typical master builder of the day. He asked me what I intended to do. I told him that one of the professors of the school had two places to offer me in houses engaged in commercial pursuits, considered high positions in that period, and that Professor Bache had offered me a position in the coast survey. With a look of disgust and contempt, his denunciation of my suggestions as to accepting either of them was more than vigorous. Amused at his manner, I asked him what he recommended. "Oh! be of some account. Take your father's business; or, if you say so, I'll see Jacob Neafie about getting you there." My mind had already been made up with regard to the shipyard, as it was my father's profession and that of five great-uncles and a grandfather; and having had the words "master builder" drummed into my ears from early childhood by my mother, grandmother, and all of my aunts, it is no surprise that I was so inclined. My great-uncles were John Birely, Joseph Norris, John Bennet, William Sutton, and George Cramp.

Among the great shipbuilders or master builders who were to

be found in New York at this time were: the Webbs, the Westerveldts, the Steers' family, J. Simonson, Bell & Brown, Smith & Dimon, and many others besides; in Philadelphia, while the output there was not so great nor the vessels so large, were to be found John Vaughn, John Birely, William Cramp, Matthew Vauduzen, John K. Hammet and many others. Most of these shipbuilders neglected to familiarize themselves with the application of the steam engine to ship construction even in the most general way, and this resulted in a gradual elimination of the cult or guild of the master builder that had existed for centuries.

Shipbuilding in Philadelphia at an early period was included in a triangle of Kensington, bounded by Frankford Road, the Delaware River, and Montgomery Avenue. It included in it the site of the old Treaty Tree, and had been occupied by the master builder, shipwright, ship joiner, ship caulker, ship smith, mariner, ship owner, and others pertaining to the profession, from Colonial times. While other pursuits had crept in, these were the prevailing ones there.

The first inhabitants, whose occupation was mostly of a maritime character, including all of the consequential occupations referred to, came from the neighborhood of the river Tyne, in England, and some of the sayings and practices which were supposed to belong to that part of Kensington alone, I found on the river Tyne when I visited Newcastle and the Armstrong works.

The shipwrights and their associates, in the pride of their occupation, held themselves aloof from the other denizens of the triangle; they drew the line at all occupations outside of or not connected with their cult, and if a daughter married outside of the line she was promptly placed under the ban of social ostracism. The sacred precincts were often invaded, and the occupants often strayed beyond the borders, but that will always occur.

The pride and peculiarities of these people were indicated in many ways. All shipwrights wore white shirts while at work, and in warm weather they put a clean one on every day. A woman soon lost caste if she permitted her husband to go to work two consecutive days in the same shirt. They took particular pride in the cleanliness and clothing of their children, particularly in regard to school attendance, and they never sent them to the public schools until the grammar school and high school were estab-

lished, as six months' attendance at grammar school was necessary to enter the high school.

A mortal antipathy to the use of the "pitching axe" in place of the broadaxe for "knocking off the rough," was one of the prejudices of the shipwright. Tinkering with his wages or working hours could be overlooked on reasonable grounds, but to work in a yard where a "pitching axe" was permitted was too much for him. It was a tool of low degree, and its use considered bad form, notwithstanding there were good reasons for it.

I was present when a shipwright was hewing out a large piece of timber, when additional men from New Jersey who had just been employed, were put to work on the same piece of timber. At the first crack of the axe the Philadelphian looked up at the unfamiliar sound, and seeing with astonishment the men swinging their "pitching axes," he immediately dropped his tools, put them in his box, and, shouldering it, started out of the yard at a rapid gait. Seeing him go off in this style, the employer sang out, "Where are you going, Jack?" He never stopped, but fiercely murmured that he wouldn't work in any yard with— —Hoosiers." No argument permitting its use was listened to until the period of the Civil War, when, on account of the demand for vessels, large sub-contracts were made with groups of four or five superior men at good prices. These sub-contractors hired all the "Hoosiers" they could get, giving them a dollar a day over regular wages as an inducement to work for them. At that time no objection was made to the "pitching axe." The sub-contractors went so far as to use the axe themselves.

What I have said of the neglect of the shipbuilder to familiarize himself with the necessary changes growing out of the introduction of steam power and of iron in the place of wood does not apply to our company, as we witnessed the very beginning, appreciated its importance, and were convinced of the impending and inevitable revolution in the art; we therefore prepared ourselves by securing all the information accessible here and elsewhere both as to the use of iron and the use of steam. We began the construction of iron vessels in a comparatively small way during the Civil War, and our yard became a sort of kindergarten, as most of the workmen had to be trained to the work and working appliances had to be designed. Most of the members of the old firm could take any part of the building of a ship, from mould loft to launching; and they soon were able

to take any part of iron work, from bending frames to bending plates and designing furnaces and other appliances. We soon found that practically new men would have to be utilized, as the boiler makers, mostly foreigners, who worked at the business were few in number and did not grasp the mechanical necessities of the new departure.

A German, nicknamed "Red John," with a gang of his cronies, who was the only workman here who could bend frames at that time, gave us much trouble, as he considered that if he stopped work the whole yard would collapse. A party of young fishermen, under the leadership of one of their number who had been watching them, claimed that in a week they could do better work and more of it. They went to work with a will, and in a few days they accomplished more than they had promised.

Many young ship carpenters and joiners and some fishermen, all natives of this place, in order to secure themselves against probable changes, took up all the varieties of the work except riveting, which they did not consider a mechanical occupation.

With their mechanical instincts and perhaps superior education and training they soon outclassed the old stager, and all of this work up to the present time has been done by these men.

Most of the foremen, leaders and best men, from drawing-room to riveters, in all of the new shipyards have come from our place, and in that respect they might be considered branches of the old firm.

The first iron boat built in the United States, about 1838, was a barge called the "Codorus," and soon after another was built by Jesse Starr, in old Kensington, several squares from the river, near old Marlborough and Franklin Streets (Girard Avenue). I saw it as a boy, when it was hauled down to the river by a large team of horses from the boiler works where built.

A barge built of iron by boiler makers and hauled through the streets of old Kensington, the citadel of the shipbuilder, was an event of great wonder and importance. It attracted great crowds witnessing the transportation to the water, and was an endless subject of discussion at that place.

Several small vessels were built afterward by engine builders and boiler makers, it being practically conceded that as plates were to be bent and riveted, an iron vessel was a type of steam boiler, and none but boiler makers were expected to build them; and they continue to do so practically up to the present time.

The public, the shipbuilder and the engineer, during the progress of iron construction, never seemed to grasp the situation. They thought—and they were educated by the iron builders to think so—that, the vessels being of iron, the monstrosities that they turned out were normal conditions due to iron construction, that a well-designed vessel of good shape could not carry anything, and that ugliness was indispensable to a good freighter. They also spoke sneeringly of vessels which were always shipshape and handsome as “yachts,” whether they were for freight, speed, or war purposes.

The thoroughbred professional shipbuilder could never be convinced that the rough and uncouth production of iron would replace wood.

One effect of the retrograde movement is still to be seen in the old English tramp in all parts of the world. In the *beginning* it arrested temporarily the progress of the art in England, and the old tramp is one of the results. But the best shipbuilders, including the Thames Iron Works, the Napiers, the Lairds, Todd & McGregor, the Stevens, Zamuda, and others there, never lost ground, and they advanced the art to its highest perfection in 1855. These great works owed much of their success to the efforts of their government in building their great navy. In 1860 Great Britain had 455 steam vessels belonging to it; a small number, less than one per cent. were iron-built. The construction of the “Warrior,” in 1859, was a marked beginning to the great navy of iron warships which to-day makes that country in warship design and construction at the top of the art.

Practically nothing was done here to encourage the business by our government, and the showing of the navy and the merchant marine was quite insignificant in the iron and steam conditions.

Lately a decided improvement in the construction of the tramp has been made by their builders.

The practice in Philadelphia by the engine builders and boiler makers who built iron vessels in the early days was to let out by contract to certain regular shipbuilders all that pertained to the shipwright profession, such as the woodwork, deck beams of wood, decks, and all the work belonging to them—laying the keel, besides making the model, “laying down,” or “laying off” in the mould loft, making moulds for the frames, superintending the

bending, raising and regulating them, running the ribbands, and launching the vessel. Many of these contracts were taken by our company before we began the iron building regularly.

The vessels that were built were restricted mostly to light draft paddle-wheel steamers and boats for river and canal navigation with a few small propellers, and were, with some exceptions, of a commonplace character. Their frames were mostly of bar iron held to plates with "keepers," and their deck frames and guards were of wood and finished as is customary in wooden steamer construction; while in England they were turning out complete ocean steamships, all of iron, and constructed in the highest state of the art in design and workmanship.

Later on, the engine builders here who had been letting out by contract all of the real shipbuilding work to shipbuilders began to do this themselves, and secured journeymen shipwrights to take charge of this work. This added nothing to the art, and a commonplace output was the result, and afforded little or no encouragement to the commercial element to remain in the business. When we found it necessary to prepare a plant to build iron vessels on our own account during the war, and to take advantage of the first favorable opportunity, little encouragement was offered by our decaying commercial interests.

In the period between 1847 and 1855 a great stimulus was lent to the shipbuilding trade by the discovery of gold in California; and these vessels were of the finest design and model that had hitherto been built. They were paddle-wheel vessels entirely of wood.

Between 1855 and 1865, and for some time afterward, war vessels built for our navy, other than monitors, were of wood, and were built principally in the navy yards, the engines being furnished by outside engine builders, principally of their own designs which had been submitted for approval, and were divided between the builders of the East, New York, Philadelphia and Boston. Certain designs of engines were subsequently purchased in England. With the exception of the construction of these ships, but little opportunity was afforded to shipbuilders to familiarize themselves in iron work.

In view of the great advance in iron shipbuilding, particularly that of warships in Great Britain, the department in Washington, during the latter part of the administration of Secretary Welles, concluded to begin the construction of several vessels of

somewhat similar type to the British armored vessel "Warrior." They were not powered for high speed, and were full bark-rigged, etc., and were supposed to be somewhat of an advance over the prevailing type of war vessel of that time. It was considered advisable, notwithstanding the demoralized condition of the business and the lack of appliance and training, that an early beginning by the government should be made.

It had been the custom heretofore, when the government desired to build certain vessels outside of navy yards, to notify certain shipbuilders of what the department needed in a very general way as to hull and hull requirements, and separate circulars regarding the engines were sent to the engine builders, and separate contracts were made with each party. There were instances following a heavy political pressure when a complete vessel was contracted for on plausible plans by a private builder. The "Lancaster" was an example of this departure, having been contracted for and built after that practice.

Having built a number of important warships of wood as well as two monitors of iron, having already added iron shipbuilding in our works during the Civil War, and having furnished and completed drawings to the department before the contracts were signed, whether the ships were of wood or iron, we stood in a very favorable position, particularly as no other member of the old *régime* existed as a factor in the business; and I was invited to examine the drawings on the day that several others who were engine builders were invited. As these parties had but little or no knowledge of the art, we expected to secure the contract and establish ourselves permanently in the business. The department exhibited a complete midship section, showing its construction, plating, frames, including a section of armor-plating, etc., leaving the bidder to determine the whole construction of the entire ship from this section. This was comparatively easy for me. It was also easy for the draughtsman who had charge of the drawing and scheme for hull construction, in another sense, as he had but little or no experience in shipbuilding; and as he did not develop the plans he could make no mistake. The whole scheme of this midship section was practically copied from the published drawings of the "Warrior."

The three other parties to examine the drawings with me were as helpless as the party detailed to make the preliminary midship section, and as only one vessel would be given to a bidder,

they all looked to me for aid in completing the plans and suggestions, particularly as to the method of calculating the weight of materials and their cost. The party from New York accepted our proposition and sketches, and presented them as his proposal.

My plans at that time for estimating the weight of the hull materials for cost, was to carefully estimate the weight of the midship section complete with beams, waste, etc., and multiply it by the length of ship, without allowing for diminish at ends, and also by two for both sides; this would allow for waste, scrap and mistakes. An experience in the calculation of weights of material in an iron ship was an unfortunate one in the case of a New York firm who desired to go into iron shipbuilding. In estimating the weight from a model, he omitted to multiply the weight by two for the other side, and did not find out his mistake until the materials were ordered.

While my method of calculating the cost was a rather crude one, it was a safe one for that period, and was not far out of the way. It was then customary here and abroad, in building large warships involving the purchase of large tools and appliances, to add their cost to the estimate of the hull. This practice contributed to the establishment of the early great ship- and engine-building works in Great Britain.

As I have already said, we looked on this scheme of the new ships as a fine opportunity for which we were waiting—the establishment of a great shipbuilding plant, capable of building the largest warships.

When the bids were sent in our bid was for the same ship complete \$3,250,000. The New York bid was the same as ours. The other two bids were for \$3,500,000. They had conceived the idea that we would bid \$4,000,000. As no shipbuilder built engines at that time, nor were hulls built by any of the large engine builders, we usually joined Merrick & Sons, engine builders, in government bids, sometimes in the name of our firm, sometimes in their name; but the business otherwise of each firm was direct with the department. I don't remember now in whose name these bids were made.

We expected, as we were the lowest bidders, to have one ship immediately awarded to us; but a number of obstacles interposed, and after some time had transpired the project was abandoned.

Some months later, in 1867, we received another invitation to

furnish proposals for a ship modified in character, and notwithstanding our proposition was in proper form, other obstacles intervened. The award was deferred for a time, and the project was ultimately abandoned for a long period of years.

We continued, however, to build small iron vessels, but it was not until we incorporated engine building with the ship work that a fair beginning was made. We had, just previous to this, built the iron coaster, the "Clyde," for Thomas Clyde, in conjunction with Neafie & Levy, who put in the engines. One half interest in the ship was taken by Mr. Clyde and the other half was divided between Neafie & Levy and ourselves. The enterprise being a profitable one, Mr. Clyde ultimately bought us out.

The "George W. Clyde," built in 1872, was the first ocean steamer built by us after we had combined engine building with our establishment, and was followed by the four American liners, "Pennsylvania," "Ohio," "Indiana," and "Illinois." These ships were about the first to be fitted with the compound engines, of present type and of our own design.

One of the reasons for the insignificant condition of steamship building and ocean commerce in this country was the absence of large machine shops and competent workmen during the first half of the last century. In fact the inventions of John L. Stevens could not be utilized at the time of invention on account of the absence of machine shops and machinists. Mr. Stevens invented the screw propeller in 1804, as it exists practically to-day, and certain types of marine engines besides, but no opportunity occurred to do anything in the introduction for nearly a quarter of a century afterward, due altogether to absence of machine shops and workmen. This fact was the principal reason for the introduction of engine building in our work.

The English had begun early to establish large machine shops for the most important engines and machinery, and devoted their time to both types of propulsion, giving particular attention to the development of screw propulsion, which they gradually brought up to a high state of excellence; and as it ultimately superseded the paddle wheel, the British gradually absorbed the commerce of the world. This was neglected on this side of the water. The paddle-wheel engine was adhered to in this country, not because of its superiority over screw propulsion, but because the large machine shops in New York could build no other than beam engines; and as most of the steamships of the

country were owned in New York, they joined in the hue and cry against screw propulsion.

In Philadelphia, the firm of Neafie & Levy had taken hold of the screw propeller from the beginning and brought the construction of it to a high state of perfection. . They were particularly noticeable on account of the simplicity of their construction; but as Philadelphia was much outranked in a commercial way, its influence was not seriously felt, as the engines turned out were for vessels of small tonnage. Many superior workmen and engineers had their early training here.

Now since iron, or rather steel, has completely eliminated wood from ship construction, Philadelphia has moved to the front in this country. The old shipbuilding district previously mentioned has changed in appearance; where piles of planking, ship timber and lumber, etc., occupied the principal space in the shipyard, will be found great buildings filled with machinery, and where hundreds of men were formerly seen plying the axe, adze, maul, etc., will be found railway tracks occupied by yard locomotives, overhead traveling cranes, stationary cranes and piles of plates, angle bars and beams. The buildings are devoted to machinery and tools for working the plates, etc. There will be found besides, power plants, steam, electric, pneumatic, hydraulic, and other machinery. In the place of the old organizations that included about a dozen different trades in the building of a ship, there will be found about forty entirely different occupations, each one of them of a separate and distinct character, to be acquired under separate apprenticeships.

The only resemblance now to be found is that the keels are laid with the same inclination for launching endwise and stern foremost, and in the staging that surrounds the ship. In fact, as far as general appearance goes, half a dozen steel ships under construction are arranged in the same manner as the old wood structure.

Where the old shipyard of Samuel Bowers, 2nd, and afterwards of Samuel Grice, his son-in-law, stood, at old Point Pleasant, are now situated the rolling mills, formerly of Robbins and Verres, Rowland and Co., and the Magargee lumber yard; on Beach Street the homes of the shipbuilding kings have been obliterated, and the high terrace on the west side of Beach Street, below Palmer, formerly the residence of the brothers Eyre, shipbuilders,

has been leveled down and the works of Neafie & Levy erected thereon.

The distinctive feature of the old triangle of old Kensington referred to has lost its picturesque standing as the domain of the cult, and its distinctive people have disappeared in the dead level of homogeneity, as far as class distinctions, prejudices, and pride of occupation are concerned. Old Kensington now is filled with new occupations, methods and ideas, and the people are engaged in the various pursuits pertaining to the new departure in the character of ship and engine building and all that relates thereto.

In the shipbuilding world, England to-day stands far beyond all other nations in the superior character of the ships turned out by their great builders, both in design and the facilities for operating them; and the rest of the world has been content to copy everything good or bad turned out there, and with particular reference to warship construction—the warship of the world is a British production. And the head and front of it, as a naval constructor and shipbuilder, is Sir William H. White, the impress of whose personality in the scope of warship design and construction is to be found in every important navy.

The best navy in the world is the British navy in all that goes to constitute efficiency: they have the best ships, the best trained artificers and trained men; England is full of the kind wanted.

In a British ship, the seamen are sailors when they go on board, and the engine-room men, artificers, machinists, stokers, oilers, and handy men for auxiliaries are ready for work when they ship.

A comparison of sea power of the navies of the world, based on the efficiency of the human increment, would vastly differ from that shown on paper by Brassey's list, reports of naval boards, and expert authorities. The events of the Spanish War and that between Russia and Japan fully justify the position I have assumed.

A great advance has been made in our navy in the direction of training and operating of what few vessels we have, particularly in keeping up the contract speed as published, handling the auxiliaries, and in the handling and firing the guns, etc. But in the great art which is the burthen of this paper we are at present making but little show. No encouragement is shown to the proficient in this country, and the introduction of no improvement is

permitted, and we are directly and indirectly governed by what is done elsewhere.

It may be stated in a general way, bearing on the great subject of ship subsidies now before Congress, that greater encouragement must be given to our merchant marine before we can parallel the magnificent progress made by Great Britain. To attain eminence as a naval power, we must encourage every branch of naval development both directly and indirectly, for the merchant marine is the great training school for the personnel of the navy.

OLD PEWTER AND ITS MARKS.

BY RICHARD W. DAVIDS.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
May 3d, 1906.)*

The question, what is pewter? may well be asked in attempting to give in a popular way a short account of a very interesting subject. It is indeed a question more easily asked than answered. Pewter may be said to be tin from almost purity to an alloy containing about fifty per cent., the other ingredients being lead, antimony, copper, bismuth or zinc; one, two, even three of these being added in quantities up to twenty or twenty-five per cent. of any of the three first named. Britannia metal is really a pewter and should contain no lead.

Regarding its history not much can be said, probably the oldest specimens were made in China and Japan, and date back some 2,000 years, none of European manufacture earlier than about 1200 are known, if we except the few pieces of Roman work, mostly seals and toys, that have been found. The age of useful pewter, if we may so speak of it, extends from, say 1300 to 1800, coming into use as its predecessor, wood, ceased to be generally employed, and receiving its quietus as the products of the kiln, pottery and porcelain, came so commonly into use when household articles of china began to be well and cheaply made.

The words "useful pewter" have been chosen, meaning not works of ornament, but those utensils of pewter which took the place of bowls and dishes of wood which our forefathers who could not afford silver used on the table in every day life. It is not meant that wood ceased to be used, or china began its age at the times given, for the former is in limited use even to-day, and there are many specimens of the potter's art dating back many centuries.

The manufacture of pewter has been chiefly by casting, molds being the principal tool of the pewterer, if we except the hammer which was so generally used in fashioning, and the lathe in finishing the work. Platters, dishes, even bowls were made by ham-

mering the sheet metal, and hollow ware was often built up of two or more pieces soldered together; the handles were sometimes in one piece if solid, or two or more if hollow.

The hammer was used not only to give shape, but also to harden the metal, and the marks were left in the finished piece. In making a bowl or plate, it was held on a polished anvil and hammered it is believed on the inside, so that what are known as hammer marks are not really such, but facets formed by the anvil; the actual hammer marks, made by repeated blows near together and so quite small, are afterwards polished away. The joining of pewter was effected either by the soldering iron or blow pipe.

The molds were generally gun metal, at least where any number of pieces was required, although castings were made in sand and plaster of paris. At one time it was thought that wooden molds were used, this on account of the grain showing so plainly in some finished pieces, it is now believed that the mold was made from a wooden pattern, itself molded in plaster. A set of well finished gun metal molds was expensive, both on account of the material and the work, they were often owned by the guild and lent or hired to the pewterers.

The lathe was used for spinning the metal as well as burnishing and polishing it; this latter does not seem to have been done by bringing the work up to a turning rag wheel, but by revolving the piece or by rubbing with the hand out of the lathe. It seems to the writer that what has been already mentioned as useful pewter is more interesting than that made even down to the present day purely for ornament, and some of the uses of pewter will next be taken up.

It is doubtful if this material was used to any great extent for actual cooking, although there are records from which it appears to have been used for holding the meat while actually boiling. Its great use, however, was in serving both solid and liquid refreshments, and this more among royalty and the nobility, afterwards by the gentry, than by the common people, at least until later times.

The pieces found in every day use, were the platters, for holding the food before it was served on the individual plates; salts; porringers, which were small bowls with a flat fretted or plain handle extending horizontally on one side, these for serving food, perhaps principally to children, and also as bleeding bowls; these

were for serving food; for drink there were tankards, which vary in size and shape, some having straight sides, others curved, some with almost spherical bodies; cans; cups; more rarely decanters and cruets, these latter not for drink, but probably as to-day for vinegar and oil. Another common article was the candlestick, made with either a slender stem on a broad base or a bell-shaped base, resembling an overgrown extinguisher. Among the few uses of pewter which have lasted to the present day, are the measures and pots used in the public houses in England, where beer and ale are often still measured by, and drunk from pewter.

Another form peculiar to this country, was the lamp, shaped like an inverted pear on a broad base, with burners rising but little from the top, and no chimney, in which was burned whale oil; both the lamp and oil are now things of the past.

Still another form was used, now revived in china, that called the hot water dish, really a flat plate soldered over a deep one with a covered opening, by which very hot water could be poured in and kept there, the idea being that so large a body of hot water would keep the plate and also the food on it warm; these generally had drop handles.

The writer remembers as a boy an inkstand which stood on the library table; it was a rectangular tray, rather deep, holding a drumlike ink well and sand box, a combination now seldom seen in this country.

So much for household pewter, though the list above is not complete; almost the only other use was that in churches. The flagon comes first and was often of handsome shape. These vary in size from the tall piece with or without lips, and sometimes with a spout not unlike that of a coffee pot, to the low form on a foot, known as a cruet: they were almost without exception made with a lid, generally with a thumb piece. They were, of course, to hold the sacramental wine. Next chalices, made of pewter, wood, horn, glass, the baser metals, and gold and silver; those of the noble metals and pewter survived as the fittest. Another piece used in the communion service is the paten, which may be either a plain plate or one on a foot. There are also alms and font basins.

Before you is part of a communion set, consisting of two chalices, one old, the other probably rather modern, two patens and a basin, whether alms or font is not known; all but the later chalice date from about 1750 and were used many years in old

St. Peter's Church in the Great or Chester Valley not far from Paoli.

Other ecclesiastical forms are benitiers or holy water basins, generally bowls at the foot of a crucifix, arranged either to stand or to hang; in addition are font-ewers, and again candlesticks.

One other use of pewter, and an early one which survives to this day, is the combination of a pottery tankard or other body and pewter lid, two examples of which are before you.

The decoration of pewter is rare rather than usual, for the reason that while easily engraved or struck into raised patterns, its softness made both forms easily destroyed or at least marred. This statement will seem to be quite erroneous when one looks at almost any book on pewter, but it would seem that most authors have preferred to figure the unusual rather than the commonplace. Other forms of ornament are due to casting in molds, fret work as seen principally in the handles of porringers and the application of other metals, paints and enamels, and lastly the application of pewter itself as a decoration to other materials, mostly wood, by overlaying or inlaying.

The embellishment as above is not common on domestic pewters; such work on it is generally confined to engraving the owner's initials, seldom name, in more or less elaborate letters, which often appear in the form of double cipher.

The softness of pewter, besides interfering with its ornamentation, is perhaps the chief cause of so little comparatively of the most used shapes coming down to us. It was the custom instead of repairing injured pieces, to have them melted down and new pieces made, in fact in the country districts there were itinerant pewterers or perhaps tinkers who could also work in pewter, and they with a few tools and a mold or two went through the country ruthlessly destroying old shapes; another cause for the disappearance of old pewter was its use as solder, it being bought more cheaply than the alloy could be made from new metal. Still another cause was the stringent rule by which pewterers were required to melt up old pieces instead of repairing them.

In speaking of the various utensils of pewter there was omitted one, very common in the olden time; this was the spoon. Laborde says it is as old as soup; these first were probably wooden, but as soon as metal was worked no doubt spoons were made of it. From what has just been said it will be easily seen why so few specimens have come down to us: spoons in use must have had

but a short life and at the first break were put aside ready for the next visit of the tinker or the junk man. Forks came much later than spoons; both of Britannia have been in use recently, if not still serving their purpose.

There remains still another use of pewter to be mentioned, one that is of interest to some members of this society: that is coins. It was used for farthings, tradesmens' tokens, and by James II. for crown and half crowns in his last campaign in Ireland. William and Mary also used it. A coin or perhaps token of the early United States was the continental dollar struck in 1776 in that metal.

We now come to one of the most interesting subjects connected with pewter; that is the makers' marks. Apparently these were used as far back as about 1500, but the oldest touchplates are no longer in existence. The marks were, of course, intended as a guarantee of quality, as those on silver and gold were and are in Europe. There were in general, two sizes of touch marks: those made by the little punches for use on spoons and other small pieces; these were no doubt copied from those used by the silversmiths, and consist of one to four different marks, for instance, the maker's initials; a head, sometimes an animal's; Britannia; and the maker's own mark, such as the dove or lamb; often there was only one punch used, or perhaps two, but four marks were generally made by repeating, giving the same effect as the hall-marking of silver. The larger marks were originally the maker's initials or name, later made more elaborate with his emblem, usually all in frames of various shapes; a second mark of about the same size, not always in a frame, was the rose, generally crowned, which was the quality mark of the Pewterer's Company; this often had an inscription "made in London" or even the address there; a third mark was the X, also generally crowned, sometimes repeated; this was supposed to show that the pewter was of extraordinary quality or hard metal.

In many cases a single piece of pewter had all or nearly all of the above marks, and the initials were often not those of the accompanying name; in such cases the ware was no doubt made by one of the persons and sold by the other; sometimes the marks were dated.

Besides these marks, pewter bears others, such as "Superfine Hard Mettle," "In the Minories," etc., as a separate mark in addition to the usual crowned rose and others just mentioned.

One other mark needs just a word: that is the government stamp on measures, vouching for their proper size.

The subject of marks does not seem to have been exhausted as a study, and one thinks in reading the minutes of the Worshipful Company of Pewterers, whose records go back to 1348, that most of its business has to do with them. At one time the word "London" might not be used and it was allowed only because those out of London were using it to the harm of the makers there; then again it was some time before the address was allowed on the stamp, it savoring too much of advertisement, and this was especially mentioned as a thing to be avoided.

The makers were under strict surveillance, those making ware below standard were fined and their punches confiscated. They were then ordered to use a new punch with a knot or a double *f*, this was an acknowledgment of wrongdoing and was equivalent to being ordered out of business.

The above marks were used in England but the rose and crown was a device much in vogue on the continent. The writer has been able to find but little on the subject of continental marks, the only piece so stamped has three marks made by two punches, a double-tailed lion rampant or supporting a two-storied castle, this repeated; the other, H S in monogram, with 13 below.

CERAMIC FORGERIES.

BY EDWIN ATLEE BARBER, A. M., PH. D.

*(Read to the Numismatic and Antiquarian Society of Philadelphia,
November 1st, 1906.)*

In treating the subject of reproductions, it is important to bear in mind the difference between *imitations* and *counterfeits*. An imitation is a more or less faithful reproduction of a genuine object, which is not intended to mislead. It may be issued for the purpose of showing skill in the resuscitation of a lost art, or to furnish a replica of some noted work of art where an original is not procurable, as the copy of an antique statue, or an electrotype of a noted piece of silver. A counterfeit, or forgery, on the other hand, is the more or less exact copy of a genuine piece, designed expressly to deceive. The rare soft paste porcelain of Capo-di-Monte was extensively imitated at the Meissen factory, but the crossed-swords mark of Meissen was always placed on these pieces to show that they were merely copies of the celebrated Italian ware. These apparently harmless Meissen copies, however, have been counterfeited by the ceramic forgers, even to the mark. The one is, therefore, an imitation, the other a forgery of an imitation.

But while simple imitations may not be intended to deceive, the collector should always be on his guard against them, lest he fall into the trap in which a prominent merchant of New York City was caught a few years ago. The firm of which this merchant was a member caused to be made hundreds of copies of the plates belonging to the famous Martha Washington dinner service, bearing around the border a chain of fifteen links, each one enclosing the name of one of the States. These were offered for sale at \$1.97 each, and were scattered broadcast throughout the country, as souvenirs. Some years later, one of these identical reproductions, handsomely mounted in a velvet frame, was offered at an auction sale of Washington relics in this city, and the merchant whose house had sold them, believing it to be, as described in the catalogue, a piece from the original service, bid it up to

\$250; and not until it was forwarded to him and he had carefully examined it did he discover its identity. A year ago there appeared in one of the Philadelphia daily papers an illustrated description of a wonderful find of a cup and saucer from the Martha Washington service, which the owner was willing to sell at the nominal price of \$150. On investigation, these pieces proved to be recent copies of the old ware, painted on modern French china.

I have here one of the New York reproductions, purchased at \$1.97, an exact counterpart of the one which sold in Philadelphia for \$250.

The inordinate greed of collectors of pottery and porcelain is accountable for the development in recent years of a flourishing industry in Europe, and particularly in Paris, where vast quantities of almost every known ware are counterfeited annually. Several enterprising manufacturers in Paris have retired with large fortunes after a few years of this nefarious traffic, and at least one house is still actively engaged in the counterfeiting of almost every noted continental fabric, and even of Chinese porcelains. A prominent citizen of Philadelphia, some years ago, brought back from Europe a full dinner service of what he supposed to be genuine soft paste Sèvres porcelain, of the period of Louis XV., which, had it been authentic, would have been worth at least \$100,000, and would have attracted the attention of the connoisseurs of the world as being the only service of the kind in existence. Only two or three weeks ago, there appeared in the printed catalogue of a prominent auction house in this city five items, of one dozen each, of Lowestoft plates, notwithstanding the fact that only one or two genuine pieces of Lowestoft porcelain exist in collections in this country. On inspection, these pieces proved to be French counterfeits of Chinese ware, execrably decorated, in supposed imitation of English Lowestoft. To such an extent has this illicit trade increased that a French newspaper recently stated, probably without exaggeration, that the sale of spurious Sèvres porcelain alone nets the counterfeiters 16,000,000 francs each year, and yields the retail dealers in Europe and America the enormous sum of 48,000,000 francs, or \$9,600,000. It is, therefore, not a matter for surprise that almost every American tourist who returns from abroad brings with him some of these worthless fabrications.

Within the past ten years, vast quantities of English china, bear-

ing printed designs of American scenery and historical buildings in dark blue, have been made in England for a Baltimore firm and sold extensively to American collectors at \$20 and upwards a piece, at a net cost to the importers of about 20 cents each. At nearly every public sale of old china in the large cities of this country, some of these plates and jugs find ready purchasers. A recent visit to a Philadelphia antique shop revealed the fact that almost every article on sale, whether china, glass, silver or furniture, was of recent manufacture, and yet the proprietor was making large profits from his daily sales. It is, therefore, not surprising that cautious collectors are becoming timid in adding to their treasures, since genuine pieces now offered for sale have become the exception rather than the rule. The time has come when collectors should pause in their search for acquisitions sufficiently long to fit themselves to distinguish the genuine from the spurious. The subject is such a comprehensive one that I shall be able to touch on only a few points this evening.

Every traveler to Greece and Italy is aware that classical antiquities have been reproduced there in great abundance for many years, but few have given the subject sufficient attention to enable them to distinguish the antique from the modern. Greco-Roman pottery, both genuine and counterfeit, is offered for sale in many places, and at first glance there is little to indicate the difference between them. There are, however, several infallible tests by which they can be distinguished. Suppose we take the so-called red-figured ware, extending from about 500 to 400 B. C. All genuine old pieces are coated with a black paint resembling varnish, which is so hard that it cannot be scraped off with a knife blade, and so thoroughly fixed that alcohol will not affect it. On the other hand, the black surface of recent imitations can be scraped away with a knife as white powder, and if rubbed with alcohol the black will adhere to the cloth. In the genuine, there will always be found a broad line of a second coating of black paint, outlining the reserved red figures, which is always lacking in the forgeries. Here, for instance, is a rhyton of excellent modeling, but when subjected to these tests, it is found to be a forgery throughout.

It is in the Sèvres porcelain, however, that we find the most dangerous, as well as the most numerous, forgeries. Both the soft and hard paste porcelains of Sèvres have been copied extensively for many years, and counterfeits are more frequently found

in the hands of dealers, and in many public and private collections, than genuine pieces. These spurious wares may be divided into two groups: First, those which were made at the Sèvres factory and sent out in an undecorated condition, to be afterward painted by unscrupulous dealers into whose hands they fell, and sold as Sèvres work; second, those which are spurious throughout, the body, decorations, and marks having been copied at other establishments.

The first variety may be known by the genuine marks of the Sèvres works, that used since 1848 being a small oval ellipse in yellowish green *beneath the glaze*, enclosing the letter "S" (Sèvres), and the last figures of the date as, "S. 74," standing for "Sèvres, 1874." This mark is obliterated by a deep scratch through the center, produced by a cutting wheel, showing that the piece left the factory in the white state. The dealer, however, if questioned regarding this scratched mark, will inform the purchaser that only extra choice pieces were so marked at the factory. Undecorated or slightly embellished services were furnished to the dignitaries of State, under Napoleon I., Louis Philippe, and Napoleon III., which, from time to time, found their way into the market and fell into the hands of the counterfeiters. Between the years 1880 and 1890, large quantities of refuse or imperfect porcelain were given to hospitals, and much of this was secured by speculators. To place on these genuine pieces elaborate decorations of cupids, garlands of flowers, gold monograms, and false marks was an easy matter, and uninitiated purchasers could always be found ready to pay large prices for them. In some cases, the paintings were of such excellence that they might readily deceive an expert, but an inspection of the marks will in most instances reveal the spurious character of the work. Among the imitations of Louis Philippe porcelain we find large quantities of plates, cups, saucers, and other pieces, decorated with a solid blue ground. This color, when it occurs on hard paste porcelain, is intended to imitate the beautiful turquoise blue ground color of the soft paste of the eighteenth century. The imitation is raw in color, opaque, filled with specks, and feels rough to the touch, and bears little resemblance to the genuine. Thousands of pieces so decorated are brought to this country every year by American tourists. In most of these pieces, made during the Napoleon III. period, will be found a date mark, rudely scratched in the paste, standing for the year and month when the article

was turned, as "73-12," meaning December, 1873. Frequently these pieces have been embellished with the monogram of Napoleon I. or Louis Philippe, and antedated with an overglaze decoration mark. A plate of this character was recently brought to me by a lady who had paid a large price for it in one of the principal shops in Paris. It was of hard paste porcelain, decorated on the face with paintings of cupids and garlands of flowers and gold monogram of Louis Philippe, with a solid blue border. On the back was the overglaze mark of the royal Chateau of Fontainebleau and a second mark indicating that it had been decorated at Sèvres in 1848. On the edge of the back of the plate, however, were scratched in the paste beneath the glaze the figures 76-10, showing that the piece was not made until October, 1876. Such pieces are the most numerous among the Sèvres forgeries.

The second variety of fraudulent Sèvres ware can best be detected by the marks and the decorations, since the paste is frequently a more or less close imitation of the original. The forged elliptical mark, to which reference has already been made, is of a different shade of green from the genuine, a brownish olive, which is somewhat larger in size, and is printed *over* the glaze, instead of *beneath* it. Many of the imitated marks have been wrongly applied, showing that the forgers did not acquaint themselves with the true significance of the original marks.

The question naturally arises, "Why does the French government permit this wholesale counterfeiting of the wares and even of the marks of the national manufactory?" I cannot better explain this peculiar condition of affairs than by quoting from a letter recently received from Monsieur Taxile Doat, of Sèvres. He writes:

"In France, as in the United States, every commercial product, in order to be guaranteed against forgers, must have its mark deposited in a special office. Here, it is at the Tribunal of Commerce.

"The monarchs who have reigned in France, with the exception of Louis XV. and Louis XVI., have never made deposit of the marks of Sèvres manufacture, which belonged to them personally. Only the Royal or Imperial authority arrested, by fear of prison, the boldness of forgers, who counterfeited Sèvres ware but very little during the lifetime of these monarchs; moreover there is no incentive to the forger to imitate anything but old pieces, which collectors want at any price. But after the lapse

of twenty-five or thirty years, pieces of the preceding reign become old, and there is profit in forging them. Now, since the mark was never deposited, neither the law nor the manufacturer can take action against the dishonest trafficker.

"In 1900, the impudence of the forgers was such that the government was provoked to register the present mark of Sèvres (the monogram 'R. F.' in a circle), which ought to have been done a hundred years ago.

"A Louis Philippe plate costs the counterfeiter from five to twenty francs, and he sells it for 80, 100, 150 or 300 francs, according to the decoration he places upon it. Whole services are fabricated in the style of Napoleon I., the Empire, of Louis Philippe, with all the marks under and over the glaze. A china dealer who would find it difficult to sell a fine genuine modern service at 100 or 150 francs, can readily dispose of a sham Empire service at 1,200 to 1,500 francs. I have seen sold to an English collector a fraudulent set of twelve tea cups for 1,400 francs. I know of five Parisian houses that have made their fortunes from the sale of these counterfeits.

Nor has Chinese porcelain escaped the successful attentions of the French counterfeiters. For the reason that hard paste French porcelain resembles superficially the paste of Oriental porcelains, it is comparatively easy for the French fabricator to simulate the Chinese ware. But in the spirit of the decoration we can readily detect, particularly by comparison, a vast difference. I happen to have here to-night a genuine Chinese plate of peculiar pattern. I also have a modern French copy of the same design. An examination of the paste will show that the Chinese ware has a bluish tint, while the counterfeit shows a creamy or yellowish tone. The great difference between the two will be seen in the details of the painting, which in the spurious piece is much cruder and more poorly drawn.

The famous factory of Capo-di-Monte, near Naples, Italy, has produced some of the most beautiful and characteristic porcelain, decorated with relief designs of marine and mythological subjects, artistically colored, the flesh tints of human figures being finely stippled in the style of miniature painting. Some idea of the rarity of this porcelain may be obtained when it is stated that there are perhaps not half a dozen authentic examples in public or private collections in this country. And yet there is scarcely an auction sale in this city, in which one or more so-called genuine

pieces are not catalogued. Particularly at this season of the year, one will meet with numerous examples in any of the large auction houses, which usually bear the Capo-di-Monte distinguishing mark, a letter "N" beneath a crown. It is perhaps needless to say that all of these, without exception, are gross forgeries. A genuine piece, if procurable at this late date, would command an almost fabulous price.

Palissy ware is extensively imitated and counterfeited at the present time, and pieces can be purchased for a few dollars; but the only fully authenticated example which has been offered for sale recently, so far as we know, was valued at \$40,000.

I might call your attention to the imitations of Wedgwood, of so-called Dresden, or Meissen (so extensively counterfeited), of Italian majolica, of Delft, of old French faience, always to be found in abundance in the antique shops, but I have already taken up enough of your time. In conclusion, let me sound a warning against the wiles of the average European or Oriental dealer. There are honest exceptions of course, but honesty and expert knowledge constitute a combination that is rare among them. And perhaps it would be well to keep an eye on our American dealer, for in him you may find greater sincerity, perhaps, but always combined with impenetrable ignorance.

EXAMPLES OF SÈVRES FORGERIES EXHIBITED.

Cup and saucer. Imitation of soft paste. Jeweled decoration on Sèvres blue ground. Forged throughout, body, decoration, and mark. It is not the soft paste of Sèvres. The mark indicates the year 1771, while jeweled decoration was not used until 1779, or 1780. Color, gilding, and painting are inferior.

Comport. Imitation of soft paste style, but on hard paste body. Rose Pompadour ground was never satisfactorily applied to hard paste, and the latest known piece of soft paste bearing this ground color is dated 1761. Sèvres hard paste was not made previous to 1769. Paste and decoration forged throughout.

Plate. Hard paste imitation of soft paste, decorated with turquoise blue, glaze mark on the back "S. 74," meaning "Sèvres 1874," the mark being scratched through, showing that it left the factory undecorated. The body mark scratched in the paste is 1873. Over the glaze is the 1847 mark of the Louis Philippe Chateau of Fontainebleau. The paste, therefore, is genuine, but

the decoration is forged, and the decoration mark is antedated 27 years.

Small plate of hard paste porcelain with mark "S. 60" (Sèvres 1860). This is the glaze mark, showing that it was glazed in that year, while in the paste is incised "59-11," meaning "November, 1859," when the piece was turned. The mark on the back (1868) and the gold monogram and decoration on the front are forged.

Plate. Hard paste porcelain. The paste, decoration, and marks, are all forged. The central decoration has been *printed in outline* and filled in with color, which was never done at Sèvres.

These few examples will convey an imperfect idea of the character of the forgeries of the Sèvres porcelain, but the ingenuity of the counterfeiters is so boundless that it would be impossible to do full justice to the subject in the space of an entire evening.



This plate is a genuine Chinese plate of the eighteenth century. The porcelain is of a pronounced bluish tinge, and the decorative details are carefully drawn.



CHINESE PLATES, GENUINE AND COUNTERFEIT.

This plate is a modern French reproduction. The paste is of a deep cream color, and the decorative details are carelessly drawn. The difference can best be seen by comparing the drawings of the lion and the vase and the four axe-shaped ornaments around the central design.



SÈVRES PLATE, FORGED DECORATION.

The body of this plate is genuine, but the decoration is the work of counterfeiters. Thousands of these plates with blue borders, cupids, wreaths of flowers in colors, and gold monogram of Louis Philippe, are sold to English and American tourists every year. These plates are all forgeries, as the scratched marks will usually show.



IMITATION OF SÈVRES PORCELAIN.

The paste, decoration, and marks are forged throughout. This is an example of modern French production, made extensively for sale to English and American tourists.

NOTES ON THE AMERICAN FLAG AND SOME OTHERS.

BY CHARLES E. DANA.

(Read to the Numismatic and Antiquarian Society of Philadelphia, December 6th, 1906.)

Gentlemen: Even so slight a history of the American flag must, of course, consist largely of quotations from various sources, reliable and otherwise. Such a mode of treatment lends itself readily to the extreme of dullness, as I fear you will later admit. I therefore crave your patience and promise to be as brief as possible.

Back as far as we can penetrate we find the Egyptians waving flags: the head of a god or goddess, an animal, or something else, on the end of a spear. Among the early Greeks this was replaced by a piece of armor, though Agamemnon, according to Homer, used a purple veil to rally his men. Later, the Athenians bore the olive and the owl. The Persians fought under a golden eagle. The ancient Gauls preferred a bull, a lion or a bear. (Fosbrook, *Dictionary of Antiquities*.)

The dragon, which seems to have served as a standard for the "Barbarians," was adopted by the Romans, most probably on account of the number of Barbarians incorporated into their legions. These dragons were embroidered in cotton, or silk and purple. The head was of metal, fastened to the top of a spear, gilt and tasseled; it opened its mouth wide, which made the long tail, painted in brilliant hues, to float out in the wind. This same Dragon Standard was for a long time that of the Western Empire, as well as of England and Normandy. (Sir S. R. Meyrick.) The dragon has continued ever since to form part of the royal arms of Denmark. Stowe thinks that the Dragon Standard was only used when those who followed it meant real, serious war. He also thinks that it was, during a battle, planted on some prominent and well-defended spot, so as to form a rallying point to which the wounded and the weary might repair as to a castle or place of security.

The Danish standard bore a raven. One of the pennons in the "Bayeux Tapestry" bears a bird that is sometimes said to represent the Danish raven; unfortunately, it might with equal reason represent the English sparrow.

The Double-headed Eagle is said to have originated among the Romans, emblem of their sovereignty over the Eastern and the Western Empires. When the Empire was divided the Two-headed Eagle was used by both. From the Eastern division it passed into the standard of Russia, at the time of the marriage of Ivan I. to a Grecian princess, early in the fourteenth century (?). From the Western Empire, with the title of Emperor, it passed, in 1806, to the House of Austria, a by no means happy example of symbolism. (Schuyler Hamilton, pp. 17 to 21.)

The earliest representations of the Imperial German Eagle have but one head usually, the two-headed species appearing about the fourteenth century.

FRENCH FLAGS.

There is a mosaic, alas, much restored (how much, is one of those questions it were better to ignore), in the Basilica of St. John Lateran, Rome, representing St. Peter, Pope Leo III. (795 to 816), and Charles the Great. It is (or was) contemporaneous, because both Pope and Emperor wear the exceedingly ugly square halo, which was all even these mighty ones had a right to while they remained denizens of this wicked world.

The figures are each duly labeled so that no mistake is possible. The Saint is presenting the Pope with the Pallium, emblem of ecclesiastical authority, while to the Emperor he gives the blue Oriflamme, emblem of military power; these together symbolize the "Holy" Roman Empire.

The Flag is blue with three flame-like points at the fly. On the body of the Flag are six red quatre-foils, in vertical lines, beginning at the lance end (hoist), three, two, one. This Oriflamme was called "Roman," probably because the Pope, representing St. Peter, presented it to Charles when he crowned him Emperor on Christmas day, A. D. 800, in Rome. It is also called "Montjoie" (Mont Joy), as the *Song of Roland*, written about the end of the eleventh century, tells us in a burst of poetic anachronism, which, literally translated, runs thus:



St. Peter giving the Oriflamme to Charlemagne and the Pallium to Pope Leo III. From a contemporaneous mosaic in the Church of St. John Lateran, Rome.

"Montjoie! they cry, among them is Charlemagne.
 Geoffroy d'Anjou bears there the Oriflamme.
 It came from St. Peter and had name of Roman,
 But for Montjoie its name it did exchange."

That Geoffroy d'Anjou lived more than three centuries after Charles was a detail this poet deigned not to notice.

"Montjoie" then became the battle-cry of France.

About 1082, St. Denis was promoted to be the patron saint of France, a very honorable position, but not without serious drawbacks. The battle-cry was then augmented to "Montjoie, St. Denis!" The chief herald of France, as soon as he strutted upon the stage in his gorgeous vestments, took the name of "Montjoie."

The "Chape de St. Martin," meaning the Cape or Mantel of St. Martin, of Tours (316-396), is always reputed the first Standard of France proper. What that Cape was is absolutely unknown, and, as it is likely to remain so, it is not worth our while to consider it further. Probably the kings of the first and second race, say, to 1000, possessed an oratory which contained, amongst other holy relics, this "Cape of St. Martin," which was regarded as amongst the most precious contained therein. This oratory may have been carried on their campaigns. From the "Chape de St. Martin" are derived the words, *cap*, *cap*, *capella*, *cape*, *chapel*, *chaplain*, etc.

The Oriflamme of St. Denis was another of that small and select band of flags which came down from Heaven: a curious fact connected with the products of the divine looms is that they are not impervious to the attacks of mundane moths. When the land was at peace, the Oriflamme hung suspended, over the grave of St. Denis in the great Abbey built in his honor. It was the private flag of the Abbey, and was carried in time of war, by the Counts of Vexin (the province of the Vexin had been given to the Abbey by King Dagobert, 602-638, or one of his immediate successors), as bound by feudal tenure. Under King Philip I. (1060-1108) the Vexin was reunited to the crown, and the kings took upon themselves the duties of faithful vassals to themselves; so about 1082, the Oriflamme became the *national* banner of France.

Guillaume Guiart, who wrote about 1306, describes it as "a banner made of silk, stronger than gimp, of flaring cendal." *Cendal*, *sendal*, or *sandal*, was a coarse sort of stuff "of a raw

kynde of sylke or sarcenett" (1598) used in the Middle Ages. A thirteenth century stained glass window in the cathedral of Chartres, France, represents Henry, Lord of Argentin and du Mez, bearing the Oriflamme. It is plain, devoid of any ornament; red, the martyr's color, and the fly ends in five flame-shaped streamers or points, the slits between which extend more than two thirds of the way to the staff, much the shape of the Oriflamme of Charlemagne. The flag *may be* three feet long and fifteen inches wide. The Oriflamme flashed triumphant over many a well-fought field, but after the fearful disaster of Agincourt, where it is said to have been carried for the last time, its original angel bearer must have rescued it, if rescued it was.

The last we hear of it is a mention by an author of dubious date, 1504 or 1594, who saw it neglected and dishonored at St. Denis, almost entirely devoured by moths.

BRITISH FLAG.

As our own flag is so directly an outcome of the British, and as the history of the British flag is of more than passing interest, I shall make no apology for this digression; in fact, I will not admit that it is a digression.

October 14th, 1066. The sun is getting low over the rolling hill of Senlac. On the center of a mound, the key of the English position, the last stand was made. Above it floated the great Dragon of Wessex, for Harold was Earl of Wessex, with the Royal Standard beside it. There stood "Harold the Dauntless" on foot, as English kings then fought, to show that there was no retreat. Gathered about him were his House-Carles. In front were the men of Kent, who claimed the right to be in the van. They bore on their banner then, as now, the "pale charger," the "white horse of Hengist," but, alas, their proud motto of "invicta," unconquered, was not to be gained on that bloody day. It was now six o'clock in the evening, and the battle still raged. The Norman archers kept up a steady rain of arrows on the helpless mass about the standards, till an arrow pierced Harold's right eye, and he fell where so gallantly he had fought; his two brothers, and most of his nobility, dead about him; so that at the foot of the Great Standard,

"He was keeping
Royal state and semblance still."



Henry, Lord of Argentin and Du Mez, bearing the Oriflamme of France.
From a thirteenth-century window in Chartres Cathedral, France.

Wace says, that William of Normandy, after the fight, had his tent pitched where the Great Standard had stood.

“Entre li morz mainga et but.”

Among the dead he ate and drank.

He also had the spot carefully marked, so that we may feel reasonably certain, when, pausing by the old stone altar in the crypt of Battle Abbey, we are standing on one of the spots most memorable in English history. (696 a. Dana Bk.)

Moule says: “A dragon was depicted on the banners of the Anglo-Saxon kings of England and was so born by the Milesian [ancient Irish] kings of Ireland.”

During the Crusades it was considered the symbol of the British nation. From having been used by Cadwallo, and other potentates of Wales, it descended to King Henry VII. (+1509) and by him the red dragon was assumed as one of the royal supporters. *Rouge Dragon*, Pursuivant, was created by Henry, and named after the Red Dragon. (D. B., 378.)

One authority gives the standard at Creci (1346) as a “burning dragon made of red silk and beaten about with gold and vermillion.”

Professor J. K. Laughton, one of the very best authorities, says that by the middle of the fourteenth century, and during the “Hundred Years’ war,” St. George’s cross was distinctly marked on English ships, and it waves over every British warship this very day, one of the most beautiful of flags.

Leif, the son of Eric the Red, sailed southward from Brattahlid, in Greenland, in the summer of the year 1000, he touched first on the coast of Labrador or Newfoundland and then sailed southward to Vinland, where the grapes and the Indian corn were ripe. Where was Vinland? We are not likely ever to know. Probably on the New England coast, north of Cape Cod. What flag did they fly, these real discoverers of America? Was it the sable raven of Denmark? or was it the “sun-boar,” Gullinbursti, on which Frey, son of Niord the Van, rode? or was it the dragon of the Vandals, which still forms part of the Danish arms?

The first flag of which we have any account, displayed in our hemisphere, was that of Spain, the royal ensign, just the same as the one now used, except that it bore only the quarterings of

Castile and Leon, each repeated. Don Fernando, son of Columbus, describes the landing of his father, October 12th, 1492, on that mysterious island of San Salvador: "Columbus, dressed in scarlet, first stepped on shore from the little boat which bore him from the vessels, bearing the royal standard of Spain, emblazoned with the arms of Castile and Leon in his own hand, followed by the Pinsons in their own boats, each bearing the banner of the expedition; viz., a white flag with a green cross, having on each side the letters 'F.' and 'Y.' Ferdinand and Isabella, surmounted by golden crowns."

John Cabot was probably a Genoese. He is supposed to have married a Venetian woman and moved to Venice with his second son Sebastian in the year 1474. In the archives of Venice, we read: "1476, 28th day of March, that a privilege of citizenship within and without be entered in favor of John Caboto, as usual, in consequence of a residence of fifteen years." The citizenship *de extra*, comprised the enjoyment of all commercial rights which Venice possessed in foreign lands, together with the right of sailing under the flag of St. Mark.

About 1490, the Cabots moved to Bristol. John Cabot's petition to King Henry VII. begged to be allowed "to seek out, discover and find whatsoever islands, countries, regions, or provinces of the Heathens and Infidels, in whatsoever part of the world they be, which before this time have been unknown to Christians;" this petition was dated March 5th, 1495-6. Getting his permission, he sailed forth in the "Matthew," with a crew of eighteen men, on May the 2d, 1496. On June 24th, St. John the Baptist's Day, he landed in *North America*, the first person after the Vikings (?)—where? Labrador, Cape Race, Cape Breton, or elsewhere. We have no record of what he did further than that he found traces of the Indians, who had probably gone into hiding when they saw the ship; that he erected a wooden cross, and that he unfurled the flag of England, presumably the red cross of St. George, together with the crimson, Winged-lion Flag of Venice. To a lover of that most fascinating and beautiful of all cities, it is very pleasant to think that the Flag of St. Mark, in company with that of St. George, was the first to fly over our land. *Pax tibi Marce evangelista meus.*

As crosses play an important part in our own flag, it behooves us to look at them and their history with some attention:

St. George was the patron saint of Aquitaine. Henry II. set

up his son Richard, an ungrateful son indeed, as ruler over that province. It is probable then, that after he became king in 1189, he retained St. George, with his red cross, as his tutelary saint, for which reason England also elected that mythical hero to be her saint. I could give you a long dissertation on the subject of the color of the crosses used by the French and the English, as well as other nations. Some think that the English cross was originally white, and the French red; this seems improbable, and the exchange must, if there is any truth in the legend, have occurred before Richard's time, as we have a seal, that of the borough of Lyme-Regis, attached to a document bearing date, 1284. Upon the seal is the effigy of a ship, and at the head of its single mast floats the cross of St. George; the saint himself, with his cross shield, pierces a dragon over the bow of the ship, and, I think St. George preëmpted the rosy cross at a very early date. This is said to be the most ancient effigy of the saint killing the dragon that exists in England.

The white ensign, bearing the red cross, is the "distinction flag" of the British navy, and is restricted, except by special royal grant (the yachts of the Royal Yacht Squadron of England being one exception), solely to ships bearing His Majesty's royal commission. By the Admiralty Regulations, a fine of £500 may be imposed on any other ship wearing the white ensign. Under this flag of the red cross, Cabot discovered North America; Drake sailed round the world; Frobisher sought the Northwest Passage;* Raleigh founded Virginia; the Mayflower bore her colossal cargo of clocks, furniture and ancestors; the English carried confusion into the Spanish Armada, and Nelson fought Trafalgar, with many other events in between. Finest of all, Sir Richard Grenville, in the little "Revenge," fought, in the Azores, September 1st, 1591, the whole Spanish fleet of 53 ships. Tennyson makes Sir Richard reply to his sailors who want him to escape:

" . . . We be all good English men.

Let us hang those dogs of Seville, the children of the devil,

For I never turned my back upon Don or devil yet."

Of course Sir Richard was wounded, and though he sturdily cried, "Fight on!" the Dons got on board. Equally, of course, the conduct of the Spaniards toward Sir Richard and his men

*Which plucky Captain Roald Amundsen, a modern Viking, under the blue cross of Norway, has just found, 1905.

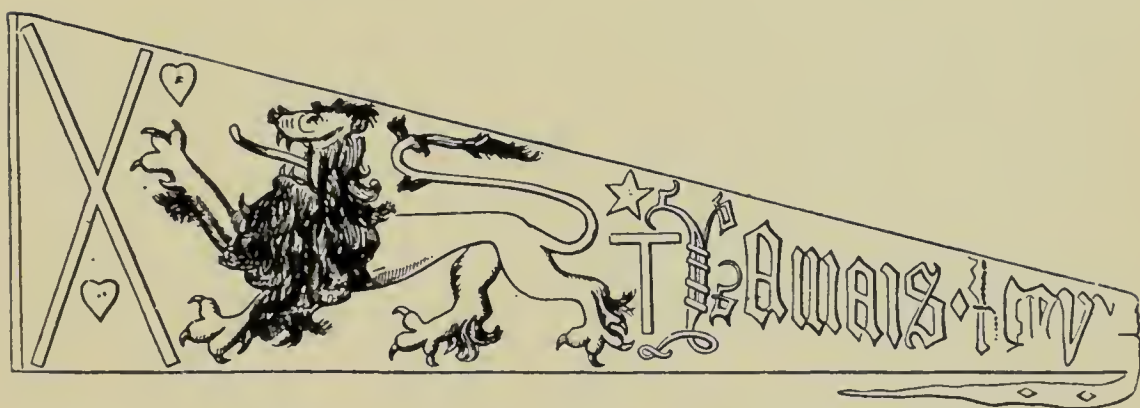
was all that chivalry could desire, most courteous and kindly. But Sir Richard soon died and the "Revenge" foundered in a storm.

Curiously enough, another and similarly gallant exploit took place, not far off in these same Azores, and although I have carefully searched my Tennyson, I cannot find any mention of the event, which leads me to fear that my copy of the great laureate's works is imperfect. Chronologically the occurrence I am about to mention could not be more absurdly out of place than it is here, but I am sure you will pardon me.

On the evening of March 26th, 1814, the little American privateer "General Armstrong," of about seven guns, was lying in Fayal Roads, a neutral Portuguese port. A British fleet entered, consisting of the 74-gun ship "Plantagenet," the 38-gun frigate "Rota," and the 18-gun brig "Carnation." These, with a bully's disregard for all law that a weak opponent (the Portuguese) could not enforce, made two attacks with their full strength on the little American, in armed boats, each carrying a carronade in the bow, and were handsomely beaten off with a loss to the British of 63 killed and 110 wounded. The American loss was 2 killed and 7 wounded. As it was impossible to escape, Captain Reid, the Yankee commander, sent his plucky crew ashore and scuttled his ship. I think the terrible "long-Tom" of the privateer was raised lately, and is now in the Naval Museum in Washington, a grim relic of those rough heroes, who deserve as much and even more praise than Grenville and his crew. That was the heaviest loss the British suffered in any sea fight during our War of 1812. But alas for a nation without a laureate.

The size of the standards in 1544 was: The king's great standard, to be set before his tent or pavilion, but not to be borne in battle, length, eleven yards; the king's standard, to be borne in battle, eight yards or nine; a duke's seven yards; an earl's, six, and so on; every standard and guidon to have in chief the cross of St. George, and on the fly, the crest, arms and motto of the owner.

In early days every leader or knight, bore his own distinguishing flag, so that when they went aboard ship all these flags were displayed in brilliant array, while the sides of the vessel itself were made rich by the blazonry of shields hung along the bulwarks. The very sails gleamed with armorial bearings, and



Standard of Earl Douglas, 1388. Motto, *Jamais arrière*. Flag about thirteen feet long.

became monster flags, or sometimes they were covered with huge, sacred pictures; especially was this the custom in the Spanish navy. One sees a survival of it to-day in the gayly colored sails on the Venetian lagoons.

A warship in active service carried the flag of the leader, and often that of his patron saint. A merchantman usually bore, not the national flag, but the flag of the port, the "house-flag." Among foreigners, this custom was only lately abandoned. In France, for example, down to the Revolution, merchantmen flew the white with a blue-cross flag of Marseilles, or that of Dunkirk; a rather interesting flag, six blue and white stripes (or was it plain white?) with a canton bearing the cross of St. George in remembrance of the English occupation. (387 D. B.)

A contemporaneous picture, 1515, of the "Henri Grace à Dieu," the largest warship then afloat, shows her most plentifully decked aloft, with huge white standards bearing the red cross, two or three of them thirty or forty feet in length, while along the deck several private flags are visible. (*Hist. of the Union Jack*, p. 66.)

A series of orders which might be called "Articles of War" have come down to us, dating from the time of Richard II. (murdered 1400). As there was no active war with France during his reign, their origin is probably from his grandfather, Edward III. (+1377); this is one of them: "Every man, of what estate, condition, or nation he be, so that he be of our party, shall wear a sign of the arms of St. George, large, both before and behind, upon peril that if he be slain or wounded to death, he that hath done so to him shall not be put to death for default of the cross that he lacketh. And no enemy, whether prisoner or not, shall wear the said sign of St. George, upon pain of death." (D. B. A. 487-B. *Nicholas's Battle of Agincourt*, p. 110.)

King John (1199+1216), in 1200, the second year of his reign, issued the following declaration, directing that ships of all other nations must honor his royal flag.

"If any lieutenant of the king's fleet in any naval expedition, do meet with on the sea, any ship or vessels, laden or unladen, that will not vail* and lower their sails at the command of the lieutenant of the king, or the king's admiral, but shall fight with them of the fleet, such, if taken, shall be reported as enemies,

*Vail—to lower or let fall, generally in token of submission.

and the vessels and goods shall be seized and forfeited as the goods of enemies."

All nations bordering on the adjacent seas, except France, under Edward I., accorded to England "possession of the sovereignty of the English seas and the isles therein," with the right of sovereign guard over these seas and all the ships passing through them. (*Hist. of the Union Jack*, B. Cumberland, p. 63.)

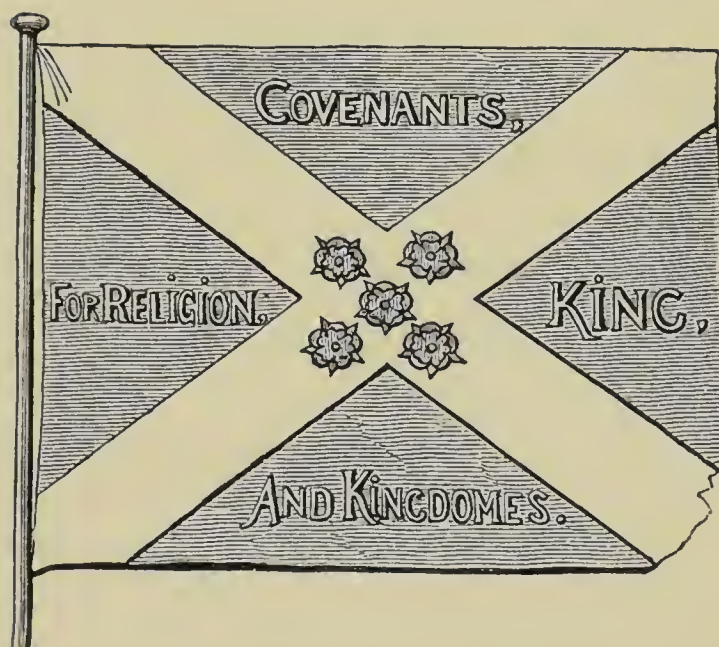
And thus it continued: In 1679 the Council of State issued the following: "And, whereas, the dominion of these seas has, time out of mind, undoubtedly belonged to this nation, and the ships of all other nations, in acknowledgment of that dominion, have used to take down their flags upon sight of the admiral of England, and not to bear it in his presence, you are, as much as in you lies, to endeavor to preserve the dominion of the sea, and to cause the ships of all other nations to strike their flags, and not to bear them up in your presence, and to compel such as are refractory therein by seizing their ships and sending them to be punished, according to the laws of the sea, unless they yield obedience, and make such repair as you approve."

But plucky little Holland and her sturdy sailors, did not see things in this light. In May, 1652, off Dover, van Tromp bore down upon the English without lowering his colors. The English admiral fired three shots at van Tromp's colors, at which the Dutch replied with a broadside. Thus began the first Dutch war, and later, van Tromp sailed the narrow seas with a broom at his masthead, token that he had swept the channel.

Unfortunately, the big bully won, and two years after, in the treaty of peace, appeared: "The ships of the Dutch—as well in ships of war as others—meeting any of the ships of war of the English commonwealth in the British seas, shall strike their flags, and lower their topsail in such manner as hath ever been at any time heretofore practised under any form of government." (*Ibid*, p. 120.)

SCOTCH FLAG.

An ancient unreliable history of Scotland, says of their saltire flag, "it took its beginning from a bright cross in the Heaven, in form like that whereon St. Andrew the Apostle suffered martyrdom, which appeared to Achaius, King of Scots, and Hungus, King of Picts, the night before the battle was fought



The White Saltire on a Blue Ground, of Scotland. As used by the Covenanters, 1679.

betwixt them and Athelstane, King of England, as they were on their knees at prayer; when St. Andrew, their tutelary saint, is said to have appeared and promised to these kings that they should always be victorious when that sign appeared. And the next day, these kings prevailing over King Athelstane in battle, they went in solemn procession, barefooted, to the Kirk of St. Andrew, to return thanks to God and his apostle for their victory, vowing that they and their posterity would ever bear the figure of that cross in their ensigns and banners." Then just as we have so satisfactorily settled the origin of the Scotch flag, along comes iconoclastic Professor Laughton, with his utterly uninteresting truth, and tells us that the legend of the Scotch flag is absolutely false: there was no Achaius, no Hungus, no Athelstane, and no interposition of St. Andrew. But, he adds, it is improbable that it was by chance only that Scotland and France, so long intimately connected, wore the same colors, and flags that differed only in form of cross, so that it is safe to say that the colors are French and may be dated from the end of the fourteenth century, or beginning of the fifteenth century.

The flags of the Covenanters are interesting in that they foreshadow the early flags of our Revolution, having long inscriptions on them. The flag of 1679, preserved by the Antiquarian Society of Edinburgh, is the Scotch flag with five roses in the middle of the cross, and the words, "Covenants," "For Religion," "King," and "Kingdomes," including punctuation, in the quarters. The celebrated "Bluidy Banner" carried by the Covenanters at Bothwell Brig, 1679, is a large blue flag with three lines of inscriptions: on top, Hebrew characters in gold, "Jehovah Nissi" (The Lord is my Banner). Under that, in white, "For Christ and his truths," and then come the words, in a reddish or blood color, "No quarters for ye active enimies of ye Covenant."

Inscriptions of many kinds appear on the flags used in the early part of the French Revolution; the idea was, quite probably, borrowed from us.

IRISH FLAG.

The "Irish Cross" does not appear upon the British national flag until 1801, and, consequently never on ours, so I will only briefly touch upon it, especially as nothing is really known about it. St. Patrick never had a cross. The cross saltire, the X-shaped cross, so far as it belongs to any saint, is sacred to St. Andrew.

It is, however, not impossible that both the Scotch and the Irish saltires are derived from the sacred monogram, devised by the Emperor Constantine the Great (+337). The arms of the Fitz-Geralds are, *argent* a saltire *gules* (a red saltire on a white ground), and the same is given as the flag of Ireland in a Dutch book on navigation, dated 1719. On a map in the National Library, Paris, dated 1534, by Gaspar Viegas, a Portuguese, both Scotland and Ireland have for arms, *or* (gold) a saltire *gules*. So although Ireland never had what could properly be called a national flag, it was, however, Laughton thinks, for reasons best known to himself, sufficiently so to be acknowledged in 1801.

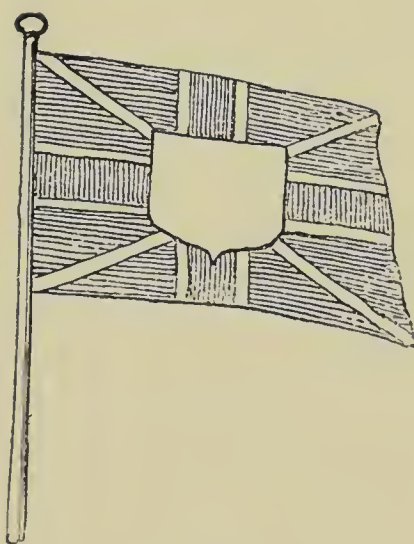
The history of the harp is equally reliable. Constantine Chlorus, the father of Constantine the Great, was the Roman governor of Britain in the reign of Diocletian, and had, about 301, completed the pacification of Ibernica—as Ireland was then called. The pagan goddess of the island was Hibernia (where did she get her “H?”) and her emblem was the harp, and this Hibernian Irish harp, Constantius, in proof of his success, adopted as the emblem on his standard.

Before the time of Henry VIII. (+1547), the arms of Ireland had been those of St. Edmund of Wessex (*azure* three crowns in pale, one above the other, *or*); they appear upon the Irish coins of the time of Henry V. and were granted by Richard II. (murdered 1400) to Robert de Vere, Marquis of Dublin and Duke of Ireland. They are now worn on the helmet plate and glengarry of the Royal Munster Fusileers.

Henry VIII. substituted on his coins the harp for the three crowns, fearing, it is said, that the latter might be mistaken for the tiara of the Pope, but he never bore the harp on his arms; that did not occur till the accession of James I., 1603. The Earl of Northumberland, who was deputy Earl Marshal when Henry adopted the harp, remarked that he had no affection for the change; that for the adoption of the harp, the best reason he could assign was, that it resembled Ireland in being such an instrument that it required more cost to keep it in tune than it was worth. (D. B. 685.)

THE BRITISH UNION.

Good Queen Bess died in 1603, and bad James Stuart, VI. of Scotland, became worse King James I. of Great Britain. He



First British Union Jack with Escutcheon ordered for the Merchant Service
in 1701.

ordered by proclamation of April 12th, 1606, that in "consequence of certain differences between our subjects of North and South Britain anent the bearing of their flags . . . from henceforth all our subjects . . . shall bear in the maintop the . . . St. George's cross . . . and the St. Andrew's cross, joined together according to a form made by our heralds. . . ." This was the first *Union Flag* or "King's Colors," and lasted through our Revolution. In 1801, the red saltire of St. Patrick was added to the "Union Jack," making what is called "compound heraldry," that is, several designs so joined together that they form but one. The Scotch and Irish saltires are "counter-changed," that is, in the first and third quarters, the white of Scotland, as senior, is uppermost; in the second and fourth, that of Ireland.

England and Scotland became *constitutionally* united on January 16th, 1707, but the Union flag was left unchanged.

Before we leave this part of our subject, there are one or two points, not wholly devoid of interest, which might be touched upon. The Union flag, or Jack of the navy is twice as long as it is wide. The "Merchant Jack" is identical in design but is differenced by a white border. When this latter Jack is hoisted at the fore, it is a signal for a pilot and in consequence of departure. On shore the Union flag is the National flag of Great Britain, being flown over fortresses, the Houses of Parliament, palaces, etc. The White ensign, with the exceptions already noted, is confined solely to the Royal navy. The Blue ensign is flown only over merchant ships commanded by officers of the naval reserve, provided, that at least one third of the sailors belong to the reserve. The Red ensign, the "Meteor Flag of England," is, at sea, the merchant flag. There is also the royal standard, which bears the heraldic arms of the sovereign, being therefore almost a private flag.

The British regiments carry, or did before the reorganization of the army, two flags: the Union flag, square in form and called the "King's Colors," bearing in the middle the regimental number, crest or other distinctive mark; the other, the Regimental flag, which has the Union in a canton (upper corner, next the staff), the body of the flag being the color of the facings of the regiment, on this is marked the names of the principal battles the regiment has taken part in, the badges, etc.

The "Mayflower" no doubt displayed the Red Cross of St.

George, when the Pilgrims disembarked at Plymouth Rock, 1620. Belonging to South Britain, she may also have worn the "King's Colors" (Union Jack) at the maintop, and a St. George's cross at the fore, as required by King James's proclamation of 1606. (Preble, p. 179.)

The Union flag was called the *Union Jack*, when it flew from the "Jack-mast" of a ship, or whatever takes its place in modern ships. This jack-mast, was a short staff raised at the bowsprit-cap. But *why* was it called the "Jack-mast" or "Jack-staff?" Every book one consults gives a different meaning. Some say it is from the name of King James, who invented the Union Jack: they seldom say very clearly why James was translated into the French, *Jacque*, for the use of English sailors. I think a simpler derivation is: *Jack* was a term applied to almost anything, and was usually derogatory: *black-jack*, *yellow-jack*, *jack-daw*, *jack-ass*, and dozens of others, especially common among sailors. The mast on the bowsprit was a very puny mast and was therefore called a "jack-staff," or mast.

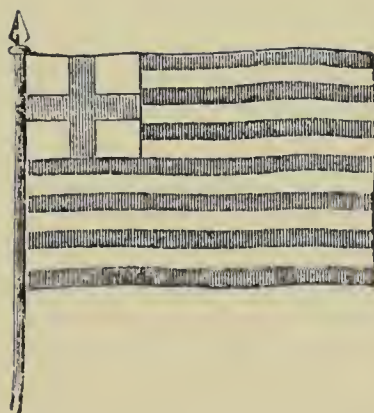
EAST INDIA COMPANY'S FLAG.

The flag of the *English*, not *British*, East India Company may seem foreign to our subject, but in view of what follows, you will see that, possibly, it is very closely connected with it.

The E. E. I. Co. was chartered in 1600 by Queen Elizabeth, as the *London*. What flag it then bore, if any, we know not. The first mention that we have of the striped flag of the company is in a book of travels by John Fryer, M. D., published in 1698, called *A New Account of India and Persia*. In Chapter III. Fryer says, "East India striped ancient . . ." ("ancient" being, of course, a standard or flag). In 1698, the company became "The English." The political power of the company ended September 1st, 1858; Victoria was proclaimed in India, "Queen of Great Britain and the colonies" on November 1st, 1858.

I will give a few excerpts, none of which are conclusive; some are from Preble, some were obtained by me at the India Office in London:

The Present State of the Universe, London, 1704. E. E. I. Co.'s flag, thirteen horizontal stripes, alternately red and white, with St. George's cross in a white canton, which rests on the middle or fourth stripe.



Flag of the English East India Company, 1704.

The Dominion and Laws of the Seas, London, 1705, gives but ten stripes.

Mr. Wm. Forster, of the India Office Records Department, gives the following from a letter of Captain C. D. Campbell, late I. N. It is undated.

"The flag always used by the old East Indiamen was the red ensign, that being the only legal flag for all British ships. The old Bombay Marine flag, was the 'gridion,' as it was called, the red ensign with the white horizontal stripes. This was altered in 1828 to the red ensign, when Captain Sir C. Malcolm assumed command of the service, and the officers given rank with the R. N. There were a number of armed native Pattimars [small, swift native boats] under native commanders, called Bombay-grabs, and these still flew the company's flag, till all were got rid of a few years ago."

It seems fair to assume therefore, that the striped flag of the E. E. I. Co. was merely a modification of the English red ensign. That it had no real legal status, and for that reason is not described in any work so far discovered in the India Office. That the fact of the stripes varying occasionally in number is but a further proof of the above, and also proves that the stripes were not emblematic, but were merely a means of "differencing" the national red ensign. That while the early flags may have borne the red cross of St. George alone in the canton, later, probably about the middle of the eighteenth century, the full British Union occupied that place of honor.

This change probably took place soon after the constitutional union between England and Scotland in 1707. An order was then issued that the Union jack should be used "in all flags, banners, standards, and ensigns, both at sea and land." The order in council bears "that the flags be according to the draft marked C, wherein the crosses of St. George and St. Andrew are conjoined."

What I would like to prove is that the "gridiron" flag of the East India Company was worn by the three tea ships which so generously provided the essential leaves at that greatest of tea parties, the one in Boston harbor, December 16th, 1773, and that, in consequence, Bostonians and many other Americans were perfectly familiar with this flag of thirteen red and white stripes.

Unfortunately careful inquiry and searches made for me in the Records Department of the India Office, London, leave little

doubt but that the ships in question wore the red ensign, for the following reasons: The East India Company did not own, they chartered the Indiamen which plied, regular "liners," between India, St. Helena in early days included, and England. In Indian waters these ships wore the "gridiron" flag, in British seas they were forced to fly the national red ensign.

Seeing that the big liners, although specially built for the India and China trade, were only chartered, it is highly improbable, that vessels used in an emergency, to carry the tea to Boston, would be any but chartered ships,* whose captains were familiar with the uninviting North Atlantic. Another proof is that the names of these captains do not appear on the East India Company's lists.

It is not, however, unreasonable to suppose that the big Indiamen when in dock, may have flown the "gridiron flag" as a kind of "house flag," from the mast head, as ships do to-day. Certainly the flag of this great corporation, representing the colonial power of Great Britain in the far East, was familiar to all British sailors, and to many Britons who were not sailors. No doubt it figured in the lists of flags carried by all large ships.

AMERICAN FLAG.

The subject naturally divides itself as follows:

I. The early Colonial flags, modifications of British or English flags, flags bearing mottoes without any devices.

II. Flags bearing emblems of Union, such as the Rattlesnake flags.

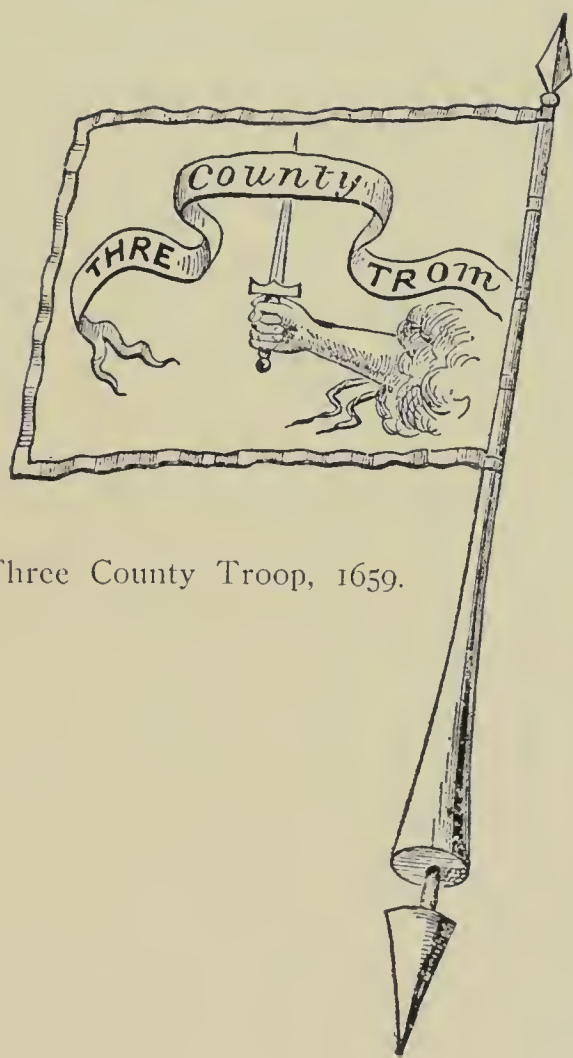
III. The Pine Tree flag.

IV. The Great Union flag.

V. The Stars and Stripes.

According to Preble (p. 182), the earliest American flag of which there is any reliable authority is mentioned in the *New England Historical and Genealogical Register* for 1871. It is the flag of a local company of cavalry, raised in 1659, just before the restoration of Charles II., by the counties of Essex, Suffolk and Middlesex, Mass., and for that reason called the "Three

*"The E. I. Company, confident of finding a market for their tea, freighted several ships to the Colonies with that article and appointed agents for the disposition of it." *American Annals*, by Abiel Holmes. London, 1808, V. I., p. 253.



Three County Troop, 1659.

County Troop." It remained in existence until 1677. There is a drawing of the flag in an heraldic painter's book in the British Museum. The design is of the usual symbolism of that day, a bare arm holding a dagger upright, protruding from a cloud, from which cloud two flashes of lightning also emerge. Above is a ribbon bearing the words "Three Country Trom," no doubt meant for "Three County Troop." Mr. Peleg D. Harrison describes* this flag, differing a little in detail, and says that the original is still preserved in the Free Library of Bedford, Mass.

The Hon. Nathaniel Saltonstall, one of the council for the Colonies, wrote, May 31st, 1684, to Captain Thomas Noyes, of Newbury, Mass., concerning the colors of a company of foot commanded by the latter (Preble, p. 183) :

"In ye Major General's letter, I have ordered also to require you, which I herein do, with all convenient speed, to provide a flight of colors for your foot company, ye ground or flight [fly] whereof is to be green, with a red cross with a white field in ye angle, according to the ancient custom of our English nation, and the English plantations in America, and our own practice in our ships and other vessels. The number of bullets to be put into your colors for distinction may be left out at present without damage to the making of them.

"So faile not,

"Your friend and servant,

"N. Saltonstall."

;

Later authorities mention a so-called "New England Flag"; in some the ground is red, in others, blue, and a very handsome flag the blue one must have been. Originally in the upper dexter quarter of the canton, which always bore the red cross of St. George on a white ground, was a globe on a stand, suggesting the New World; later a pine tree takes the place of the globe. Neither of these appear on the colors of Captain Noyes, about which N. Saltonstall wrote on May 31st, 1684.

July 29th, 1701, the Lords Commissioners of the Admiralty issued an order that merchant ships should wear a jack with a white escutcheon in the middle. This was intended especially for colonial ships, and was ordered to be worn by all merchant vessels commissioned by the colonial authorities of New Eng-

* *Stars and Stripes*, etc., Boston, 1906.

land and New York, and in 1720 by those of South Carolina—and no doubt by all others—but, singularly enough, there is no record of its use. (Preble, pp. 186, 190.)

A letter dated Westfield, Connecticut, April 23d, 1775, says: "We fix upon our standards and drums the colony arms, with the motto *Qui transtulit sustinet*, round it, in letters of gold, which we construe thus: 'God who transplanted us hither, will support us.'"

In April, 1775, six regiments were authorized by the General Assembly of Connecticut for the defense of the colony. In May, their standards were ordered. The first regiment was given a yellow flag; the second, blue; the third, scarlet; the fourth, crimson; the fifth, white; the sixth, azure. Two additional regiments were raised July, 1775, and received a blue and an orange standard respectively.

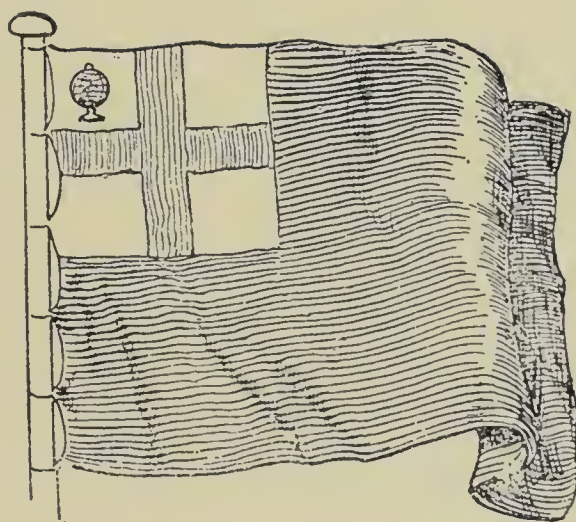
These troops were enlisted for a few months only and were not in the field at the formation of the "Connecticut line" in 1777. (Schuyler Hamilton, p. 3.)

The Connecticut Historical Society has an old red silk flag, about a yard square, upon which one can still see the arms of Connecticut in a darker red. Above, in gold letters, is: II BAT, II Regt., Connecticut, Raised 1640. . . . The last is supposed to refer to the great English rebellion as a presage for the new one just begun. (Preble, p. 197.)

On June 17th, 1775, the plucky, and on account of its moral effect, most important battle of Bunker's Hill was fought. What flag was carried there? Probably several, but what they were will, in all probability, never be known. It is more than likely that the "New England Flag" spoken of was one of them.

Let us shift our scene to the camp at Cambridge. Washington had arrived on the 2d of July, 1775. Lieutenant Paul Lunt, in his diary, says: "July 18th. This morning a manifesto from the grand Continental Congress was read by the Rev. Mr. Leonard, chaplain of the Connecticut forces on Prospect Hill in Charlestown. Our standard was presented in the midst of the regiments, with the inscription upon it, 'Appeal to Heaven' . . . and then we were dismissed, by the discharge of a cannon, three cheers, and a war-whoop by the Indians." (Preble, p. 201.)

The New England Chronicle says, "Cambridge July 21, 1775. On Tuesday morning the standard lately sent to General Putnam was exhibited flourishing in the air, bearing on one side this motto,



New England Flag, 1737.

'An Appeal to Heaven' and on the other *Qui Transtulit Sustinet*. The whole was conducted with the utmost decency, good order, and regularity and to the universal acceptance of all present." (Preble, p. 201.)

The motto "An Appeal to Heaven" is evidently adopted from the closing paragraph of the "Address of the Provincial Congress of Massachusetts to their brethren in Great Britain," written shortly after the battle of Lexington (April 19, 1775), which ended thus: "Appealing to Heaven for the justice of our cause, we determine to die or to be free;" and which motto, under the form "Appeal to Heaven," combined with a pine tree, became the motto and device of the Massachusetts colonial cruisers. (p. 26.)

We must now retrace our steps and note what is happening elsewhere in our much excited land.

CITY TROOP FLAG.

"The First Continental Congress assembled in Philadelphia, September 5th, 1774; and on the 17th of November, twenty-eight gentlemen of the highest respectability and fortunes voluntarily associated, constituted themselves the Philadelphia Troop of Light Horse, and elected Abraham Markoe captain." (Preble, p. 252.) Less than a year later Captain Markoe presented his troop with the flag they still own and cherish, and well they may, as a sacred relic. John Folwell, of whom little else is known, was paid September 16th, 1775, for "drawing and designing" the flag; while James Claypoole, who may possibly have been related to Betsy Ross's third husband, was paid for painting the flag on the 8th of the same month.

The flag carried by the troop to-day is an exact copy of this original.

Without going into a detailed description of the flag, which is familiar to you all and can be inspected at the armory; it is of silk and the color is yellow; in the middle, on a blue shield, is a knot of ribbons from which diverge thirteen undulating ends. In the canton, the square in the upper corner next the staff, are thirteen blue and silver horizontal stripes, so that this is the *first American flag bearing the emblematic stripes*, thus ante-dating the "Great Union Flag" of Cambridge, of which more anon, by four or more months.

Washington had been elected commander-in-chief of the

army on the 15th day of the preceding June. Eight days after he went from Philadelphia to New York escorted by the Troop. A point is made by those who wish to give Washington credit for the design of our flag, that he was so struck by the symbolism of the thirteen stripes, that he got them incorporated into the "Great Union Flag" of January 1st (not 2d), 1776. This may or may not be true, but at least the Troop flag with its earlier stripes, goes far to prove the falseness of the accusation that Washington planned the United States flag from his own coat-of-arms.

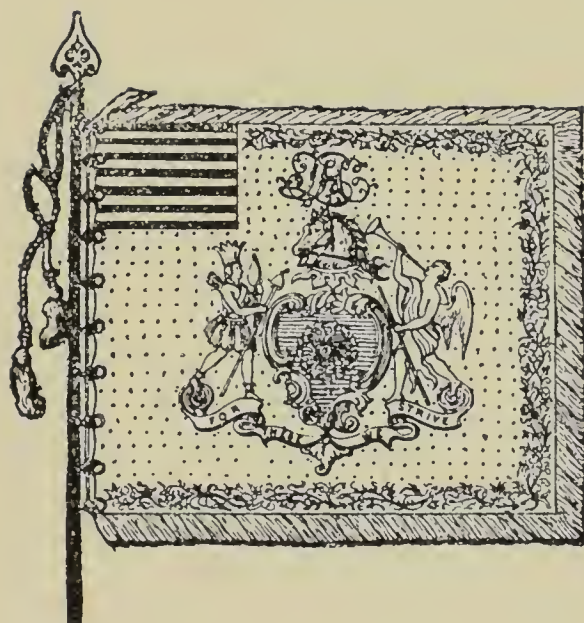
Two interesting points may be mentioned. In the Philadelphia papers of 1774 and 1775, there is not a single allusion to the formation of the Troop, nor to the presentation of the colors. (Preble, p. 255, note 1.)

Second. This is the first yellow cavalry flag used in our army. Did it give the distinction color, yellow, to the United States cavalry?

In 1765, when the hated Stamp Paper reached Charleston, S. C., it was deposited in Fort Johnson. A volunteer force took possession of the fort and captured the paper. Whilst they held the fort they displayed a flag showing a blue ground with three white crescents, which seems to have been improvised by the volunteers, of whom there were three companies. (Preble, p. 194.) But why crescents?

On the 13th of September, 1775, Colonel Moultrie received an order from the Council of Safety, directing him to take possession of Fort Johnson, on James Island, and, a flag being thought necessary, Colonel Moultrie was requested by the council to procure one. This flag was similar to the former, except that it bore but *one* crescent in the canton instead of *three*. The troops wore a blue uniform and in front of their blue caps a silver crescent, inscribed "Liberty or Death." This is the celebrated flag that the heroic Sergeant William Jasper rescued from the moat and replaced on the parapet of the fort, after it had been shot away by the guns of the British fleet, June 28th, 1776.

June 30th, 1779, the wife of Major Bernard Elliot presented Colonel Moultrie's regiment with a "pair of elegant colors; one of them was of fine blue silk, the other of fine red silk, both richly embroidered." What was embroidered thereon we know not. At the assault on Savannah, October 9th, 1779, where the French and Americans were repulsed with a loss of over a thousand men,



Philadelphia Light Horse, 1775. "First City Troop."

two officers, one after the other, who bore one of these colors, were killed. Sergeant Jasper sprang forward, seized the flag, and bore it off in safety, but, in the act received his death wound. His last words were, "Tell Mrs. Elliot I lost my life supporting the colors she gave to our regiment."

The present State flag of South Carolina is the blue flag of Colonel Moultrie, with the crescent in the canton, and, in addition, on the fly, a palmetto tree with a rattlesnake coiled at its roots: one of those specimens of landscape heraldry which our rulers are at times inspired to evolve from their rich stores of heraldic ignorance.

These are a few of the various mottoes used on plain colored flags, from 1766 until 1775:

"Liberty, Prosperity and no Stamps." Portsmouth, N. H. 1766.

"The King, Pitt and Liberty," New York, 1766.

"Liberty and Property," 1770, New York.

"Liberty and Union," Taunton, Mass., 1774.

"The King," on one side; on the other, "The Congress and Liberty," March 21st, 1775, Poughkeepsie, N. Y.

"No Popery," on one side; on the other, "George Rex, and the Liberties of America," New York, 1775. (Preble, pp. 192-197.)

"In 1754, in the *Philadelphia Gazette*, then edited by Benjamin Franklin . . . an article appeared urging union among the colonies as a means of insuring safety from the attacks of the French. This article closed with a woodcut representing a snake divided into parts, with the initial of one colony on each division, and the motto, 'Join or Die.' " (*Franklin's Works*, Vol. III., p. 25; Schuyler Hamilton, p. 74.)

When union among the colonies in 1774-76 was urged as a means of securing their liberties, this same device, a snake divided into thirteen parts, with the initials of a colony on each division, and the motto, "Join or Die," was adopted as a head piece by many of the newspapers. When the union of the colonies really took place, the helpless, divided snake became that threatening device, a coiled rattlesnake, deadly, ready to strike, with the motto, "Don't tread on me." (Schuyler Hamilton, p. 74.) This appeared early on the standards. Heraldically, the serpent is not the most noble device, but under the then circumstances it was most appropriate and suggestive.

In a letter supposed to have been written by Franklin, and dated Philadelphia, December 27th, 1775, the writer says: "I

observed on one of the drums belonging to the marines now raising, there was painted a rattlesnake, with this motto under it, "Don't tread on me" (p. 75). . . . Having pleased myself with reflections of this kind [which I have omitted], I communicated my sentiments to a neighbor of mine, who has a surprising readiness at guessing at everything which relates to public affairs. . . . He instantly declared it as his sentiment, that Congress meant to allude to Lord North's declaration in the House of Commons, that he never would relax his measures until he brought America to his feet; and to intimate to his lordship that if she was (sic) brought to his feet, it would be dangerous treading on her . . . " (p. 78).

RATTLESNAKE FLAG.

In 1775, the flag of a military organization from Westmoreland County, Penna., was made of heavy red silk, and bears upon it the British Union in a canton. In the middle of the flag is a coiled rattlesnake with head and tail erect; on the latter are thirteen rattles. Below, in large black letters, is the motto, "Don't tread on me." Above the snake, in Roman letters, is "I. B. W. C. P.," and over these, in a cypher, "J. P.," this is said to mean, "John Procter's Independent Battalion, Westmoreland County, Pennsylvania."

Admiral Preble adds, "It is the only flag bearing the rattlesnake device that I know of in existence at this time" (p. 26).

Colonel Gadsden of South Carolina, a member of the Marine Committee, presented Congress, on the 8th of February, 1776, "an elegant standard, such as is to be used by the commander-in-chief of the American navy; being a yellow flag, with a lively representation of a rattlesnake in the middle in the attitude of going to strike, and these words underneath, "Don't tread on me." Congress ordered that the said standard be carefully preserved, and suspended in the Congress room; and from that time it was placed in the southwest corner of that room, at the left hand of the president's chair." (Drayton's *Memoirs American Revolution*, II., p. 172; Preble, p. 216.)

This yellow flag with the rattlesnake in the middle, and the words underneath, "Don't tread on me," the standard for the commander-in-chief of the American navy, was probably the flag referred to by Paul Jones in his journal. Paul Jones was commissioned first of the lieutenants in the Continental navy. "This



The Dismembered Snake Device.

commission, under the United Colonies, is dated the 7th of December, 1775, as first lieutenant of the 'Alfred.' On board that ship, before Philadelphia, Mr. Jones hoisted the 'Flag of America,' with his own hands, the first time it was ever displayed, as the commander-in-chief embarked on board the 'Alfred.' " (*Life and Correspondence of Paul Jones*, p. 34.)

It is impossible to date with any degree of certainty the various striped flags bearing the rattlesnake emblem. For the fleet sailing from Capes of the Delaware, February 17th, 1776, the day-signal for a general attack, or the whole fleet to engage, was "the standard at the maintop masthead, with the striped jack and ensign at their proper places." The standard was probably the yellow flag with the coiled rattlesnake; the "striped jack" may have been a flag of thirteen stripes with a rattlesnake undulating on it. (Preble, p. 232.)

The first achievement of the squadron was the capture of New Providence, and a writer from that place to the *London Ladies' Magazine*, May 13th, 1776, says that the colors of the American fleet were "striped under the union, with thirteen stripes, and their standard (admiral's flag), a rattlesnake; motto, "Don't tread on me." As Preble suggests, this looks as if the fleet wore the Great Union flag, and that the admiral's was similar to the one Colonel Gadsden presented to Congress. (Preble, p. 234.)

The first legislation of Congress on the subject of a Federal navy, was in October, 1775. After that cruisers were equipped and sent to sea, but, as far as we can learn, without any national ensign, so that they probably wore the colors of the State they sailed from. December 22d, 1775, Esek Hopkins of Rhode Island, was appointed commander-in-chief, at a salary of \$125 a month, and, at the same time captains were commissioned to the "Alfred," "Columbus," "Andrea Doria," "Cabot," and "Providence." The first was named after King Alfred the Great, the founder of the most powerful navy that ever existed, the second is obvious, the third because "Doria" was such a great commander, the other two need no explanation. We now arrive at "The Union Flag," "The Great Union Flag" or "The Grand Union Flag," for so it is variously called.

GREAT UNION FLAG.

Dr. Franklin, Mr. Lynch and Mr. Harrison were appointed by Congress in October, 1775, to confer with General Washington

on urgent matters connected with his army. Of the nature of the discussions we have no knowledge whatever. Simply that they went to Cambridge and were back in Philadelphia early in November; as far as known Franklin does not mention the Great Union flag in any of his letters. At the risk of repetition, there being so little information on this subject, I add from Schuyler Hamilton's *History of the Flag* . . . "we may justly conclude that the Committee of Congress, composed of Dr. Franklin, Mr. Lynch and Mr. Harrison, had the subject of the flag under consideration, and the flag prepared under their supervision was the one displayed as the flag of the United Colonies, on the day the army, organized by them, General Washington, etc., went into being"—January 1st, 1776.

As far as the journals of Congress go no legal enactment authorized the Great Union flag. The official origin of the Great Union flag as well as the other striped flags worn by the fleet of Commodore Hopkins, is involved in obscurity. It is singular that no mention of their official establishment can be found in the private diaries of the times, the official or private correspondence since made public of the prominent actors of the Revolution, the newspapers of the times, or the journals of the Provincial or Continental Congresses.* We only know, from unimpeached testimony, that there was a striped continental flag, representing the majesty and the authority of the thirteen United Colonies. (Preble, p. 246.)

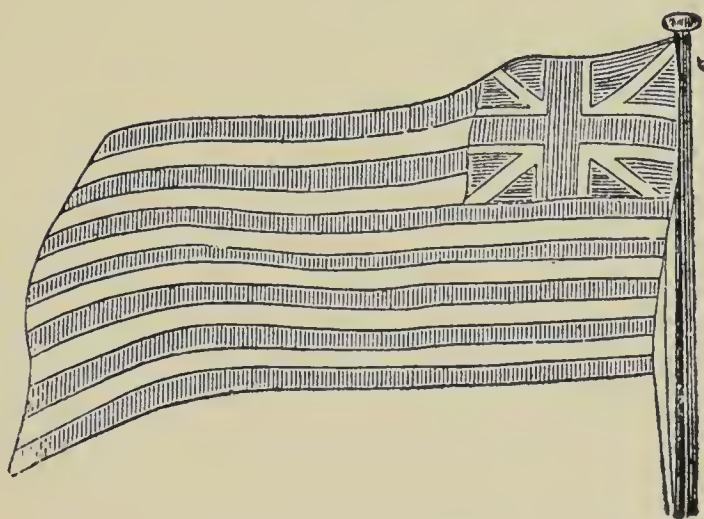
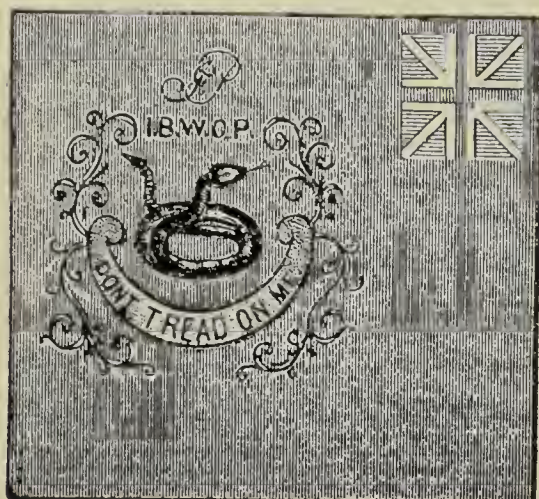
The only contemporaneous drawing of the Great Union flag is one flying from the maintop-mast of the schooner "Royal Savage," one of Benedict Arnold's little fleet, on Lake Champlain, in the autumn of 1776. The picture is a water-color and shows distinctly the details of the flag. This was found among the papers of General Philip Schuyler.

On the evacuation of Boston by the British, the "Union" flag was, on the entrance of the American army into Boston, carried by Ensign Richards. (Schuyler Hamilton, p. 59.)

When the Great Union flag was adopted, the idea of a complete separation from the mother country was only just forming in the minds of the majority of our people. So they selected

*A thorough revision of the papers of the Continental Congress is now being made and the Librarian of Congress informs me that not one word has been found referring to any flag except the resolution of June 14th, 1777. (December 25th, 1906.)

Flag of "John Procter's Independent Battalion, Westmoreland County,
Pennsylvania."



Great Union Flag.

a flag which symbolized British Colonies in arms to secure the rights and liberties of British subjects.

The flag under which their united armies had so often fought, the British Union jack, was retained, thereby showing that the United Colonies adhered to their allegiance to the mother country although they were contesting the methods of taxation promulgated by the British government.

Benjamin Franklin, as we saw, was one of the committee that went to Cambridge. Seven months before (May 5th) he had returned from a ten years' residence in Europe. It is almost certain that he was familiar with the flag of the East India Company. It probably was common in the London docks, and figured in the lists of flags known to all sailors. It was not, remember, a *national* flag, but only the flag of a *corporation*. Or, one may say, that it was practically the flag of Great Britain's Eastern Colonies; why then should it not become the flag of her Western Colonies. The symbolism of the thirteen stripes, so curiously fitted to our colonies, could not help striking that brilliant, penetrating mind of Franklin. What more natural than that this compromise standard should seem just the thing for that critical moment of the national existence? Be that as it may, the flag of the East India Company, without the change of a single detail, became the *Great Union Flag* of our colonies. The only question is, could this absolute duplication have been mere chance? *

Although the flag of thirteen stripes had been displayed before the whole army on January 1st, 1776, the following order shows conclusively that no common flag had been adopted for the continental army in February: †

"Head-Quarters, 20th February, 1776.

Parole, "Manchester,"

Countersign, "Boyle."

"As it is necessary that every regiment should be supplied with colors, and that these colors should bear some kind of similitude to the regiment to which they belong, the colonels with their respective brigadiers and with the quartermaster-general, may fix upon any such as are proper and can be procured. There must be for each regiment the standard for regimental colors

*Mr. Albert Henry Smyth, author of *The Works and Correspondence of Benjamin Franklin*, informs me that not a mention of the Great Union Flag occurs in Franklin's letters. (December, 1906.)

†Preble, p. 269.

and colors for each grandivision—the whole to be small and light. The number of the regiment is to be marked on the colors, and such motto as the colonel may choose: in fixing upon which the general advises a consultation among them. The colonels are to delay no time in getting the matter fixed, that the quartermaster may provide the colors for them as soon as possible.

“Go. Washington.”

The Great Union flag never seems to have been popular after the termination of the siege of Boston, so that we find numerous cases like the following, where officers are seeking for something that will do for a national standard, but, although they must have been aware of the, after a fashion, legality, of the Great Union flag, whether because of its character being merely that of a temporary compromise or not, they ignore it completely.

William Richards writing to the Pennsylvania Committee of Safety, August 19th, 1776, says, “I hope you have agreed what sort of colors I am to have made for the galleys, etc., as they are much wanted;” and again October 15th, 1776, “The commodore was with me this morning, and says the fleet has not any colors to hoist if they should be called on duty. It is not in my powers to get them until there is a design fixed on to make the colors by.” (*Penna. Archives*, v., pp. 17, 46; Preble, p. 246.)

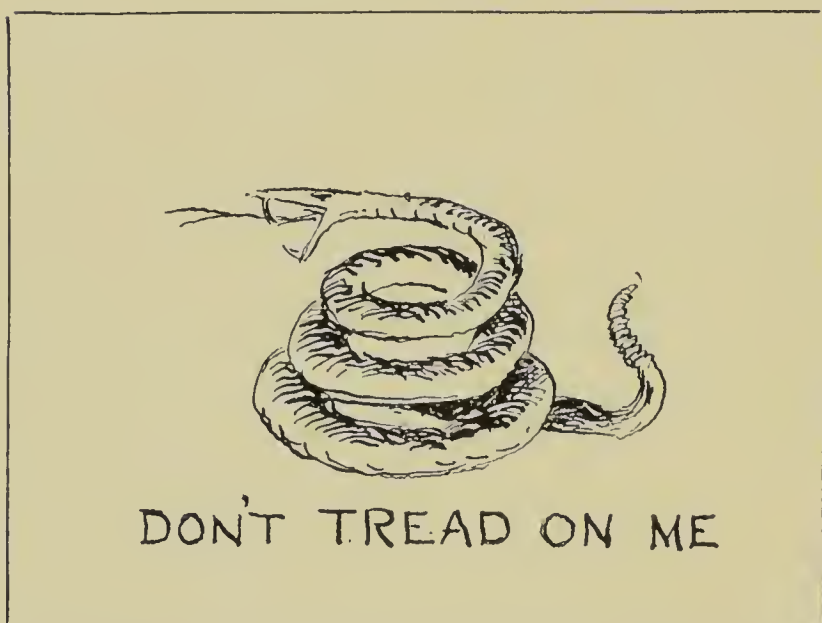
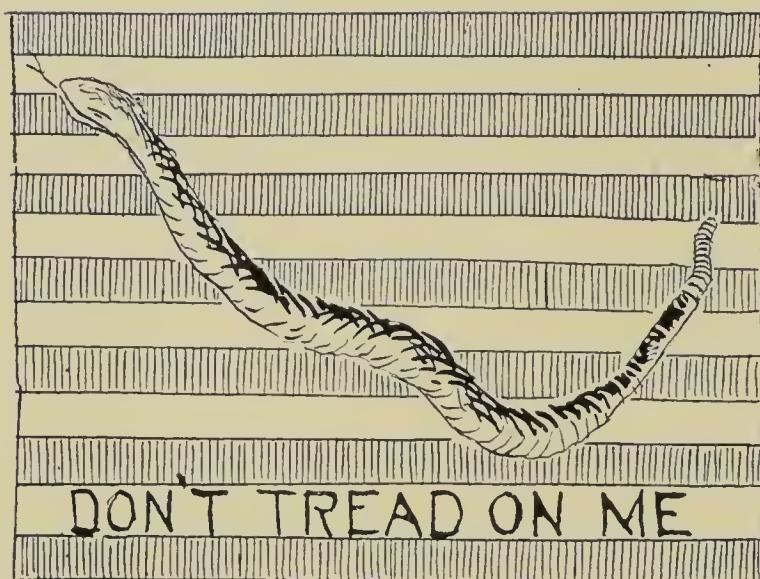
Here is mention of a flag of which we have no other knowledge.

1776. A flag is spoken of in a private letter, as flying from sixteen American privateers in Bilboa and four at Ferrol, Spain, resembling the English red ensign, except that it had thirteen stripes in the canton.* This seems unlikely, as twenty American ships could hardly have carried a flag that was only seen by one frightened English captain who scuttled away from this armada as fast as he could.

The following details about the uniforms worn may not be uninteresting:

Orders of General Washington. Cambridge, July 14th, 1775, . . . “to prevent mistakes the general officers and their aides-de-camp will be distinguished in the following manner: The commander-in-chief, by a light blue ribbon worn across his breast,

**Am. Archives*, 5th Series, I., p. 173; Preble, p. 247.



The "Striped Jack."
Flag of the Commander-in-chief of the Navy.
The Pine Tree Flag.

between his coat and waistcoat; the majors and brigadiers general by a pink ribbon worn in like manner; the aides-de-camp by a green ribbon." (Schuyler Hamilton, p. 70.)

Cambridge, July 23d, 1775 . . . "the field officers may have red or pink colored cockades in their hats, the captains yellow or buff, and the subalterns green. They are to furnish themselves accordingly. The sergeants may be distinguished by an epaulette or stripe of red cloth sewed upon the right shoulder, the corporals by one of green." (p. 71).

Cambridge, July 24th, 1775 . . . "it being thought proper to distinguish the majors from brigadiers general, by some particular mark; for the future, the major general will wear a broad purple ribbon." (*Ibid.*, p. 71.)

Alas, many of these dashing officers lacked the picturesque and ennobling sword even, so that the major-general might, it is possible, be mistaken for the high-private.

Next we come to the Pine Tree flag. This, as was but natural, seems to have been used more generally in New England than elsewhere, the pine tree having long since been selected as the emblem of Massachusetts.

By an order of the General Court in the year 1652, a mint was established and it was ordered that all pieces of money should have a double ring, with this inscription, "Massachusetts," and a tree in the center on one side, and "New England" and the year of Our Lord on the other. This was strictly adhered to by the mint master, and for thirty years all the coins now known as pine tree shillings, sixpences, etc., bore the date 1652.

It not impossible that the reason the pine tree on a white ground was so popular is partly because the white material was easy to procure, and the neighboring house painter could paint a semblance of the pine tree and do the motto reasonably well.

1775, September. Two floating batteries were launched upon the Charles River and opened fire in October upon Boston. Their ensign was the Pine Tree flag. Colonel Reed in a letter from Cambridge to Colonels Glover and Moylan, dated October 20th, 1775, says, "Please fix upon some particular color for a flag, and a signal by which our vessels may know one another. What do you think of a flag with a white ground, a tree in the middle, the motto 'Appeal to Heaven?' The flag of our floating batteries." (Lossing, I., p. 576.)

General Washington issued commissions, after despairing about

any action on the part of Congress, to six armed vessels, on the 1st of February, 1776. The "Hancock," "Lee," "Franklin," "Harrison," "Lynch" and "Warren."

Colonel Reed's suggestion that they use the Pine Tree flag seems to have been adopted: for, the *London Chronicle* for January, 1776, describing the flag of a captured cruiser, says, "The field is white bunting. On the middle is a green pine tree, and upon the opposite side is the motto, 'An Appeal to Heaven.'" (Preble, p. 203.)

April, 1776, the Massachusetts council passed a series of naval resolutions, amongst them, "Resolved, that the uniform of the officers be green and white, and that they furnish themselves accordingly; and that the colors be a white flag with a green pine tree, and the inscription, 'An Appeal to Heaven.'" "

Resolution of Massachusetts Provincial Congress, April 29th, 1776.

In the *American Archives* (5th Series, II., p. 244) there is a description of the standard of the thirteenth regiment, under date September 8th, 1776: "Ground light buff; device, a pine tree and field of Indian corn (emblematic of New England corn-fields.) Two officers in the uniform of the regiment, one of them wounded in the breast, the blood streaming from the wound. Under the pine tree, several children. One of the officers pointing to them, with the motto, 'For posterity we bleed.'" (Preble, p. 209.)

Instances of the use of the Pine Tree flag could be multiplied indefinitely, but I think there is no need to take up further time in proving that the Pine Tree flag came into almost general use in the North, *after* the adoption of the Great Union flag, and that the latter flag was almost completely displaced by it.

In the orderly book of the army, at Williamsburg, Va., under date, "Headquarters, April 8th, 1776," is found, "The colonels are desired to provide themselves with some colors and standards, if they are to be procured: it doth not signify of what sort they are." (Preble, p. 209.)

This seems to tend to show that in the South the Pine Tree flag was not accepted as a national standard.

I need not say that there were numerous other flags, both local and colonial: the red and blue striped rattlesnake, the black and yellow striped, the entrapped lion being speared by a hunter, etc., etc., these, however, had little to do with the development

of our present flag. Always remember that lack of proper material greatly influenced our flag makers.

STARS AND STRIPES.

The Betsy Ross story at which we have now arrived, would be but one of the many harmless and picturesque tales which brighten the too often dreary wastes of real history, were it not for the part Washington is made to play, that of designer of the Stars and Stripes, with a suggestion that his own coat-of-arms was in his mind when he made the design. Even if the story were true as told, it in no way goes to prove that Washington concocted the flag from his arms. The change required to transform the Great Union flag into the Stars and Stripes, was substituting a little circle of thirteen stars for the two crosses familiar to the whole country. In appearance it was almost nothing; its meaning was that thirteen squabbling colonies declared themselves one nation, and that they intended to be no longer bullied by Great Britain.

BETSY ROSS.

The following are the main points of the Betsy Ross story: they are taken from *Our Flag, Its Origin and Symbolism*, by A. N. Whitmarsh, the pamphlet being accepted at the Betsy Ross House, 239 Arch St., Philadelphia, as a perfectly satisfactory setting forth of the case:

"So many absurd stories have been published about Betsy Ross, that the following authenticated facts furnished by her grandson, Mr. George Canby, are herewith presented:

"Betsy Ross was born in Philadelphia, Pa., January 1st, 1752. She was the sixth daughter of Samuel and Rebecca Griscom. Her parents were members of the Society of Friends. Her father was a noted builder, having assisted in the erection of Independence Hall. . . . In December, 1773, John [Ross] and Betsy were married. For marrying 'out of meeting' the Friends disowned her. Her husband was an Episcopalian, she attended Christ Church with him, occupying a pew near that in which General Washington worshiped. The young couple soon embarked in the upholstery business, moving into the house 239 Arch Street. Here, from an injury received while guarding military stores, John Ross died in January, 1776. [His uncle was

the Hon. George Ross, a signer of the Declaration of Independence.] The young widow heroically determined to continue the business alone.

“When Washington wanted a sample flag made, Betsy Ross was recommended by Hon. George Ross. Washington was visiting John Hancock (?) who was suffering ‘a severe fit of the gout,’ and could not accompany his distinguished guest. Directed by Colonel Ross, a short walk brought Washington and Morris to the upholstery shop. Imagine Betsy’s surprise at the entrance of General Washington and Robert Morris. Her uncle pleasantly explained the purpose of their visit. As they wished to avoid publicity, she invited them into her little back parlor. They asked her if she could make a flag. She replied: ‘I do not know, but I will try.’

“Washington then drew from his pocket a small paper with a hurried pencil sketch [upon it], showing the outlines of a flag of thirteen stripes with a field dotted with thirteen stars. Betsy noticed the stars as drawn by Washington had six points and suggested that they should have only five. He admitted that she was correct, but he preferred a star that would not be an exact copy of his coat-of-arms. He supposed a six-pointed star could be made more easily. Betsy replied ‘nothing was easier if one only knew how,’ and quickly folding a piece of paper, with one clip of her scissors, displayed a perfectly formed five-pointed star. This point was then yielded in her favor and the design redrawn. She was left to make the sample flag according to her own ideas of proportion. It was soon completed, accepted by the committee and adopted by Congress June 14th, 1777.” Observe that, as I read you, the commodore of the fleet in the Delaware was not aware of this flag four and a half months after it was made.

“In May, 1777, Congress drew an order on the treasury to pay Betsy Ross £14 12s. 2d. for flags for the *fleet* in the Delaware river.”

This is all of Mr. Canby’s history that need concern us. Betsy married two more husbands, and died in 1832.

Note here two important points: What was this “committee?” It is not mentioned in the Journals of Congress, nor does Washington seem to have been aware of it.

The £14. 12s. 2d. was for *naval* flags, which not being needed, were—as we shall see later—put into William Richard’s store.



38. WASHINGTON'S
BOOK PLATE.

But are none of those clamoring colonels to have regimental colors?

General Washington arrived in Philadelphia on May 23d, 1776, being called here by order of Congress. His time on May 24th, 25th and 27th, was, probably fully taken up, as on the first two of those days he was summoned before Congress. On the 27th, he reviewed a force of 2,500 troops, which was so important an event that a number of members of Congress, together with Generals Gates and Mifflin, were present. On June 5th, Washington left Philadelphia. There are, therefore, nine free days, which even Baker, in his *Itinerary*, is unable to account for.

On the evening of July 4th, 1776, the Declaration of Independence was unanimously adopted by twelve of the colonies, and was immediately signed by John Hancock. Washington received it at headquarters in New York on the evening of July 9th, and caused it to be read at six o'clock that evening, at the head of each brigade.

Now we are asked to believe that, during this visit to Philadelphia, at least *one month before* the Declaration of Independence, that is, a month or more before the law-making power of the United States, to which Washington was always most loyal in word and deed, decreed our complete separation from Great Britain; that Washington, with Robert Morris and Colonel Ross, called at the little shop of Betsy Ross and then and there produced from his pocket or drew in her presence the famous pencil sketch of the Stars and Stripes.

Remember that the Great Union flag was a perfectly loyal British flag, symbolizing to those who could read, thirteen united colonies which acknowledged allegiance to Great Britain. The Stars and Stripes, on the contrary, represented "a new constellation" absolutely free and independent: in other words was treasonable.

Of course, all thought of peace with Great Britain, except as a separate nation, had long passed away, and the Declaration of Independence merely made public the opinion of the great majority of Americans. But remember also, that the act was of such vast, of such solemn import, that the delegates to Congress insisted on special instructions, each from his separate government before acting, and, remember also, that when the so-called "the Flag Committee" went to see Betsy Ross *only three* colonies had instructed their delegates to vote for independence; North

Carolina, Massachusetts and Virginia. Does it seem possible that the Washington we know would have deliberately and publicly acted in advance of his superiors in authority, and, as far as we know, on his own volition, and flung to the breeze a sacred symbol of liberty that seized men's hearts and would have made the other Declaration of Independence but a worthless piece of parchment? Could such a tremendous act have remained absolutely unnoticed in the journals of Congress, as well as in all the many writings of that day which have come down to us?

There is not one word of contemporaneous evidence to justify the legend.

As I said before, Mrs. Ross was paid for making the flags for the fleet in the Delaware River. I shall quote the whole minute and a remark of Preble's (page 270). "The first colors made for this fleet of which there is record were made by Mrs. Elizabeth Ross, as is shown from the following, extracted from the minutes of the Navy Board:

"State Navy Board, May 29th, 1777.*

"Present: William Bradford, Joseph Marsh, Joseph Blewer, Paul Cox.

"An order on William Webb to Elizabeth Ross for fourteen pounds, twelve shillings, and two pence, for making ships' colors, etc., put into William Richard's store. £14 12s. 2d."

Note that this is one year *after* Betsy Ross said she received the drawing of the Stars and Stripes from Washington. It would seem unnatural, that, if this £14. 12s. 2d., was in payment of the first generation of the newly created "Stars and Stripes" standard, the long looked for ensign, the symbol of freedom and nationality, the flags would have been stowed away ignominiously in "William Richard's store," and termed merely "ships' colors."

Also note, that, according to a letter I am going to again read you part of, in a moment, it is shown that on October 15th of the preceeding year, 1776, only eight and a half months before the date of payment of Mrs. Ross' bill, the commanding officer of the U. S. fleet, then lying in the Delaware, below Philadelphia, was utterly ignorant of the existence of any design for a national standard, and colonels were vainly clamoring for it in all directions.

Another flag maker, Joseph Webb, in Massachusetts, was paid,

*Seventeen days before the Stars and Stripes were adopted by Congress.

less than a month earlier, May 5th, 1777, eleven months *after* Washington's visit to Betsy Ross, as follows:

"Joseph Webb was paid by the Massachusetts Board of War, May 5th, 1777, 'To making an ensign and sewing in a pine tree, 6s.'" (Preble, p. 270.) Also: "1777. State of Massachusetts Bay to Jos. Webb, Dr.

"August 20. To making a suit of colours, 44s.; thread, 12s.; painting pine trees, etc., 24s."

Massachusetts had not yet heard of the national flag.

Remember that Captain William Richards wrote to the *Pennsylvania* Council of Safety, in Philadelphia, August 19th, 1776: "Gentlemen, I hope you have agreed what sort of colors I am to have made for the galleys, etc., as they are much wanted." Evidently he did not get an answer, so he wrote again, October 15th, 1776: "Gentlemen: The Commodore was with me this morning, and says the fleet has not any colors to hoist if they should be called to duty. It is not in my power to get them done until there is a *design to make the colors by*." Remember that this would be four and a half months after that mysterious committee had designed and adopted one of the most beautiful ensigns in the world, which, as soon as Congress did their part, the whole land embraced the new flag with a joy and pride—which I do not think, as yet, has in any way diminished. One would suppose that Captain Richards would have been reprimanded for his astounding want of initiative in not walking up to 239 Arch Street, and purchasing from Mrs. Ross an ample supply of national colors for his fleet.

Then again there is a portrait of Commodore Hopkins, "commander-in-chief of the American fleet," dated August 22d, 1776, seven weeks after the *quasi* making of Stars and Stripes began, yet, the fleet in the background, bears but two flags, the pine tree and the striped flag with the undulating rattlesnake. This might be said to be an equally strong argument against that never very popular Great Union flag, were it not that the latter is so frequently mentioned, and, of course, after the Declaration of Independence, a flag symbolizing loyalty to Great Britain became meaningless.

The following are some of the proofs brought forward by the Ross party.* The story of the brig "Nancy," which was char-

*Preble, p. 267.—"Reminiscences of Wilmington," etc. By Elizabeth Montgomery. Philadelphia, 1851.

tered by Robert Morris from Captain Hugh Montgomery. According to this legend, the "Nancy" sailed, under British colors, in March, 1776. She went to Porto Rico and other West Indian Islands. At St. Thomas they heard that freedom had been declared and also received a description of the colors adopted by the new nation. Such was the enthusiasm of the crew of the "Nancy" brig, that a flag was instantly made by a young man, who was later to be known as Captain Mendenhall. The "Nancy," reached our coast, only to be beached and blown up to escape capture by the British fleet: this last event happened on June 29th, five days *before* independence was declared, and far too soon, as news then traveled, to allow the "Nancy" to get even a drawing of that mysterious prophetic edition of the Stars and Stripes.

Another proof is that, in Leutze's picture of Washington crossing the Delaware, Christmas night, 1776, now in the Metropolitan Museum, N. Y., a large flag showing stars, not crosses, in the union, is displayed, but as the stripes are hopelessly mixed up and wrong, it is evident that the artist can hardly be accepted as an authority of much weight, especially as his picture was painted in Düsseldorf, in the early fifties. Preble speaks of a "Portrait of Washington at the Battle of Trenton, December 26th and 27th, painted by Charles Wilson Peale in 1779, in which is represented the union jack, with thirteen stars arranged in a circle . . ." also: "An unfinished sketch of the battle of Princeton, January 3d, 1777, in the Trumbull Gallery at New Haven, represents the American flag with thirteen stars." (Preble, p. 272.)

The following instances, and there are many more, will show what dependence can be placed upon the historical accuracy of the ordinary artist:

In the Parliament Houses, in London, is a large fresco of the departure of the Mayflower, in 1620; that ship wearing the British flag of 1801.

On the summit of the City Hall of Philadelphia is a statue of William Penn with his celebrated charter beside him: from this depends a huge seal, which ought to be the Great Seal of England, reign of Charles II., 1681. Imagine what the astonishment of Penn would be if he happened to turn and glance at the seal, on finding instead of the sacred Great Seal of Britain, this charter bore a mongrel affair, composed by the artist, without

a shadow of knowledge or authority, showing a huge coat-of-arms never seen before 1837, being the coat-of-arms of Queen Victoria.

The well-known painter, Thomas Moran, executed a series of important oil paintings representing the more memorable events in the history of the United States navy; one of these purports to show the brig "Ranger," flying the Stars and Stripes, Captain Paul Jones, being saluted by the French fleet in Quiberon Bay "February 14th, 1776," please observe the quotation marks over the date. She sailed from Portsmouth on November 1st. The French fleet and the shore boats all fly the French tri-color of to-day. Even the Great Union flag had not been naturalized on November 1st, 1775. Mr. Moran took an innocent artistic license with history. The "Ranger" arrived in Quiberon Bay on February 14th, 1778, not 1776. That makes Paul Jones and the "Ranger" all right, but what can possibly be done for the unfortunate, and then, loyal Frenchmen who are flying in 1778 the revolutionary flag of 1793?

Returning to Philadelphia. Supposing for a moment, that the flag was ordered on May 26th, 1776, the first free day Washington had in Philadelphia; supposing that Mrs. Ross did not hurry, and that it took a week to make the flag, that it was finished on June 3d or 4th, so that Washington could see it before he left town on June 5th, 1776. There is fair evidence that a starry flag, which would unquestionably have been made by Betsy Ross, flew at the battle of Brandywine, September 11th, 1777, no evidence whatever, of any sort worth considering seriously, that any starry flag made by her flew before that day. Where then during all that time—June 4th, 1776 until August or September, 1777 was the "sample flag?" Did Mrs. Ross, forgetting to send in her bill, put it away in her cupboard, and then she, and Washington, and Robert Morris and Colonel Ross—all of them, forget its existence and the interest they once took in it until Washington came back in August, 1777?

One other point. Please note, that while the starry flag was spoken of in the newspapers in the month of August, 1777, the official proclamation did not take place until September 3d. Yet such was the enthusiasm of our gallant and long suffering troops to use the national emblem; so instantly did it spring into favor with all, or rather become an object of worship, that a queer collection of rags, of which more anon, was made to represent it at Fort Stanwix, between August 2d and 6th, 1777, and, as

I said, it, in all probability flew at the battle of Brandywine, September 11th, 1777, as well as at Cooch's Bridge, September 3d. From that time on it had no rival, whether pine tree or rattlesnake; from New Hampshire to Georgia it was hailed with delight. But why, if the Betsy Ross tale be true, did all this enthusiasm lie dormant for over a year, and then of a sudden, with no apparent cause, blaze forth?

Mrs. Betsy Ross died at the advanced age of eighty, in the house of the parents of Mr. Canby, he himself having, at the time of her demise, reached the age of eleven. He says in some letters on the subject, "I have the narrative from the lips of the oldest one of my aunts, now deceased, reduced to writing in 1857. It is not a tradition, it is a report from the lips of the principal participator in the transaction, directly told, not to one or two, but a dozen or more living witnesses."

This was the great event in the life of the very highly respected old Quaker lady; she no doubt dwelt on it more and more as time drew away from it. The glamor about it might easily have dimmed a detail such as a date, and the constant repetition might readily have confused even her truthful mind. It only requires a very trifling change to make the story quite probable, thus:

Supposing that it was during Washington's later visit to Philadelphia, August 2d, 3d and 4th, 1777, while he was waiting for some possible explanation to the erratic sailings of Howe and his army. Our poor soldiers were looking forward, as usual, to battling against almost hopeless odds. Washington longed to have them fight under the starry banner of the new nation. The flag had been authorized by Congress six weeks before, but had not been officially proclaimed to the public. Washington made a rough pencil sketch of his conception of its appearance based on the wording of the resolution. Looking about for someone to make the flag, his friend Colonel Ross, a member of Congress, recommended his niece—by marriage—Betsy Ross, who was not only an experienced upholsterer, but had had considerable practice making flags, having been paid shortly before (May 29th) £14. 12s. 2d. for making a lot of Rattlesnake or Pine Tree flags and possibly some "Striped Jacks," for the fleet in the Delaware. Colonel Ross went with Washington to show him the way; Robert Morris also accompanied them. If it adds anything to the dignity of the occasion and the pomp of the procession; they could have had Lafayette also, for it was at this time

that Washington first met him. Washington showed the awed upholsteress the rough drawing he had, and asked her whether she could make him such a flag: "I don't know, but I can try," was her prompt reply, and she proceeded immediately to introduce an improvement—the five-pointed star. The flag was finished, was received by the army, and first appeared in the field on the disastrous but far from disgraceful day of Brandywine, September 11th. This was the first of many starry flags made by Mrs. Ross, and was the pattern for those that followed, but was *not* the *first* Stars and Stripes, and neither Washington, nor Mrs. Ross had anything to do with its composition.

The following *official* account of the incidents I have already lingered far too long over, may be of interest to some. It is taken from the *New York Times* of May 29th, 1892:

"Washington, May 28th—The Quartermaster General of the army has been so bothered with questions regarding the American flag, that he has issued a bulletin which is intended to meet the numerous and diversified queries that come to his office from the patriotic curious. The statements are the result of research on the part of the clerks of the department, and may be accepted as accurate, or at least official." All that is said about the Betsy Ross incident is:

"It is not known to whom the credit of designing the Stars and Stripes is due. It is claimed that a Mrs. John Ross, an upholsterer who resided on Arch Street, Philadelphia, was the maker of the first flag combining the stars and stripes. Her descendants assert that a committee of Congress, accompanied by General Washington, who was in Philadelphia in June, 1776, called upon Mrs. Ross and engaged her to make the flag from a rough drawing, which at her suggestion, was redrawn by General Washington with pencil in her back parlor, and the flag thus designed was adopted by Congress."

There is not another word on the subject of the Betsy Ross incident.

An additional argument against the theory that Washington invented the design of our flag and that it is but a modification of his family arms, were such argument needed, is the flag of his body guard. In a flag of such a nature a distinct personal suggestion, the coat-of-arms, the crest, would have been a harmless exhibition of vanity; but even here, Washington, with his never failing sense of dignity and fitness, carefully avoided the least

suspicion of such.* The flag of the body guard was deposited in the museum of Alexandria, Virginia, by Mr. Parke Custis, together with numerous British flags captured at Trenton and Yorktown; all these were accidentally destroyed by fire shortly after the Civil War. The flag we are for the moment interested in, was of white silk and about two feet long. The design was one of those naïve patriotic compositions common to that day. A young lady, presumably Liberty or America, handing a flag to a trooper of the body guard, who evinces no disposition to tarry with her, but seems rather anxious to mount his ill-drawn steed and be off. The lady rests her left hand on an American shield of a most modern appearance, from behind which bulwark an American eagle cautiously emerges. The motto ought to have been: "Americanus sum," but is, only, "Conquer or Die." Unfortunately there seems no way to get at the exact date of this flag, which is a pity, for it unquestionably is one of the earliest, if not the earliest example of the shield and the eagle.

The body guard of 150 men, was organized in 1776, and disbanded, 38 men, in 1783. There is another curious budding of Americanism in this guard; the soldiers were picked men, but, like our modern office-seekers, they were apportioned equably among the different States. What follows proves that the flag of the body guard could not have been much earlier than 1783.

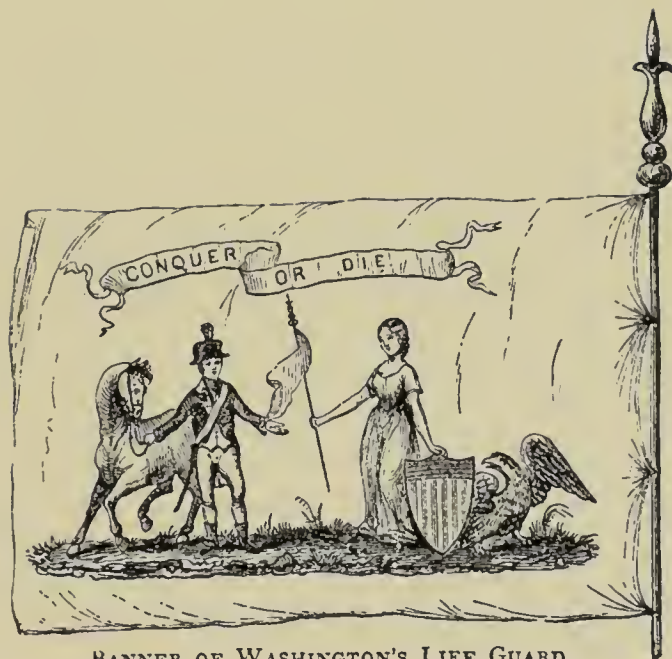
Mr. Middleton, Mr. Boudinot, and Mr. Rutledge, reported to Congress, on June 13th, 1782, a modification of a design for the United States seal submitted by Wm. Barton. This modification was referred "to the Secretary of the United States, in Congress assembled, to take order."

Device for a Great Seal, as adopted June 20th, 1782.

"The Secretary of the United States in Congress assembled, to whom was referred the several reports of committees on the device of a Great Seal to take order, reports:

"That the device for an armorial achievement, and reverse of a

*As nearly as we can learn, the only origin which has been suggested for the devices combined in the national colors of our country is, that they were adopted from the coat of arms of Gen. Washington. This imputed origin is not such as would be consonant with the known modesty of Washington, or the spirit of the times in which the flag was adopted. (Schuyler Hamilton, preface.)



BANNER OF WASHINGTON'S LIFE GUARD.

Great Seal for the United States in Congress assembled, is as follows :

"Arms.—Paleways, of thirteen pieces, *argent* and *gules*, a chief *azure*. The escutcheon on the breast of the American bald-eagle, displayed *proper*, holding in his *dexter* talon an olive branch, and in his *sinister* a bundle of thirteen arrows, all *proper*, and in his beak a scroll, inscribed with this motto: *E Pluribus Unum*.

"For the Crest.—Over the head of the eagle, which appears above the escutcheon, a glory, *or*, breaking through a cloud *proper*, and surrounding thirteen stars forming a constellation, *argent* on an *azure* field." (*The Hist. of the National Flag of the U. S. of A.*, Schuyler Hamilton, p. 106.)

And now let me give *in full* the history of the Stars and Stripes.

On Saturday, the 14th of June, 1777, the American Congress:

"Resolved, that the flag of the thirteen United States be thirteen stripes alternate red and white; that the union be thirteen stars, white in a blue field, representing a new constellation."

That is all we are ever likely to know of the history of our flag. A careful examination by the Librarian of Congress of the Rough and Smooth MS. Journals of Congress, now in the Library of Congress, and also of the files of the original drafts of motions made in the Continental Congress, shows that this is the first legislative action of which there is any record for the establishment of a national flag.

This resolution was printed in the newspapers in August, but was not officially promulgated over the signature of the Secretary of Congress, until September 3d, in Philadelphia, and in other places later.

It does not appear from the record whether it was the device of a committee, or of an individual, or who presented the resolution. It seems probable, however, that it emanated from the Marine Committee, if not from a special one, and such is the tradition. There are many theories as to its origin, but, though less than a century and a half has elapsed, none is satisfactory. (Preble, p. 260.)

It will therefore, in all probability, never be known who designed our union of stars, the records of Congress being silent upon the subject, and there being no mention or suggestion of it in any of the voluminous correspondence or diaries of the time, public or private, which have been published. (Preble, p. 265.)

Paul Jones has recorded that the "Flag of America" was

hoisted by him, "by his own hand," on board the "Alfred," and adds, "being the first time it was ever displayed by a regular man-of-war." In a letter to Robert Morris, dated October 10th, 1783, Jones says: "It was my fortune, as the senior first lieutenant, to hoist the flag of America the first time it was displayed. Though this was but a light circumstance, yet I feel for its honor more than I think I should have done if it had not happened."

In a letter to Baron Vander Capelland, Jones says: "America has been the country of my fond election from the age of thirteen. When I first saw it, I had the honor to hoist with my own hands the flag of freedom, the first time it was displayed on the Delaware; and I have attended it with veneration ever since on the ocean." (Preble, p. 230.)

Paul Jones claimed it was his good fortune to be the first to display the Stars and Stripes on a naval vessel, as it had been his to hoist with his own hands the "Flag of America" for the first time on board the "Alfred." He also claimed to have received the first salute to our star spangled banner ever granted in Europe. (Preble, p. 274.)

What the *Flag of America*, which Jones hoisted on the "Alfred" was, is unknown. The first military incident connected with the new flag occurred on the 2d (Fiske says the sixth) of August, 1777, when Lieutenants Bird and Brant invested Fort Stanwix (called that same year, or the preceding one, Fort Schuyler, now covered by the city Rome, N. Y.), then commanded by Colonel Peter Gansevoort. The garrison was without a flag when the enemy appeared, but their patriotism and ingenuity soon supplied one in conformity to the pattern just adopted by the Continental Congress. Shirts were cut up to form the white stripes; the red stripes were made from the petticoat of a soldier's wife; the blue ground for the stars, was the cloth of a cloak belonging to Captain Abraham Swartwout, of Dutchess County, who was then in the fort. Before sunset, this curious mosaic standard was floating over one of the bastions. (Preble, p. 276.)

Hearing the ominous firing of the battle of Oriskanny, August 6th, 1777, where the heroic Herkimer was wounded unto death—his leg was so unskillfully set, that he died a few days later, sitting in bed, propped up by pillows, calmly smoking his Dutch pipe and reading his Bible at the XXXVIII Psalm—Colonel

Gansevoort at once understood the whole situation, and instantly ordered a sortie to serve as a diversion. The sortie was a brilliant success. Sir John Johnson, with his Tories and Indians, were completely routed and driven across the Mohawk River. Colonel Marinus Willett took possession of his camp and held it while seven wagons were three times loaded with spoil and sent to the fort . . . the victors captured five British standards. . . . After this useful exploit Colonel Willett returned to the fort and hoisted the captured British standards, while over them he raised an uncouth flag, intended to represent the American Stars and Stripes, which Congress had adopted in June as the national banner. . . . This was the first American flag with the Stars and Stripes that was ever hoisted, and it was flung to the breeze on the memorable day of Oriskanny, August 6th, 1777." (*The American Revolution*, John Fiske, Vol. I., p. 292.)

Mr. Whitmarsh says, p. 10, "Officially the Stars and Stripes was first unfurled August 3, 1777, over Fort Schuyler, a military post in New York State." But my dear Mr. Whitmarsh, that would be fourteen months after Betsy Ross made the model flag. Where has it been all that time?

On the 27th of April, 1805, Lieutenant O'Bannon of the marines and Mr. Mann, hauled down the Tripolitan colors displayed over the fortress of Derne, and unfolded "our flag" of fifteen stars and fifteen stripes in their place, the first American flag planted upon a fortress of the old world." (Preble, p. 325.)

Paul Jones in his letter to the Naval Committee, February 22d. 1778, says: "I am happy to have it in my power to congratulate [you] on my having seen the American flag, for the first time, recognized in the fullest and completest manner by the flag of France. I was off this bay (Quiberon) on the 13th inst., and sent my boat in next day to know if the admiral would return my salute. He answered that he would return to me as the senior American continental officer in Europe, the same salute as he was authorized to return to an admiral of Holland or any other republic, which was four guns less than the salute given. I hesitated at this as *I had demanded gun for gun*.

"Therefore I anchored in the entrance of the bay at a distance from the French fleet; but after a very particular inquiry on the 14th, finding that he really told the truth, I was induced to accept his offer, the more as it was an acknowledgment of American Independence.

"The wind being contrary and blowing hard, it was after sunset before the 'Ranger' was near enough to salute [Admiral] La Motte Piquet with thirteen guns which he returned with nine. However, to put the matter beyond a doubt, I did not suffer the 'Independence' to salute until the next morning, when I sent word to the admiral that I would sail through his fleet in the brig, and would salute him in open day. He was exceedingly pleasant, and returned the compliment also with nine guns." (Preble, p. 275.)

Dating our flag from 1777, makes it one of the oldest flags in the world. The red, yellow and red flag of Spain dates from 1785. The tri-color of France from 1793. That of Italy, it is claimed, from 1797. Great Britain, 1801. Sweden and Norway, 1817. Portugal, 1815. Switzerland, 1817 or 1851. Belgium, 1831. Germany, 1866. Austria-Hungary, 1866, etc.

The flag of Denmark is very old, being one of those which came down from heaven. It is also the model from which the flags of Norway and Sweden are taken. Holland, artistically said to be the most beautiful flag in the world, dates from 1599.

From the point of view of the artist, our flag is not above criticism; it is wanting in simplicity, there being too much detail crowded into it. The thirteen stripes from a distance become a blurred pink, while the blue union with its forty-five stars, becomes a lighter blue, unless, as seems to be the present fashion, the stars are reduced in size to meaningless dots.

On the 13th day of January, 1794, the following bill was passed by Congress: "Be it enacted, etc., that from and after the first day of May, one thousand seven hundred and ninety-five, the flag of the United States be fifteen stripes, alternate red and white; that the union be fifteen stars, white on a blue field."

The same Congress, on the 27th of March, 1794, authorized the building of the frigate "Constitution" and five other frigates, the beginning of a new navy. The new flag floated over her and all of our vessels of war throughout the war of 1812-14. (Preble, p. 308.)

Twenty-four years later, Congress passed the following:

"An Act to establish the Flag of the United States. Sec. I. Be it enacted, etc., That from and after the fourth day of July next, the flag of the United States be thirteen horizontal stripes, alternate red and white; that the union have twenty stars, white in a blue field.

"Sec. II. And be it further enacted, That on the admission of every new State into the Union, one star be added to the union of the flag; and that such addition shall take effect on the fourth of July next succeeding such admission." Approved April 4th, 1818. (Preble, p. 345.)

"Yesterday," says the *National Intelligencer* of April 14th, 1818, "about two o'clock, the new flag of the United States was hoisted on the flagstaff of the House of Representatives. This is the first flag that has been made under the new law. It was made in New York, under the direction of the gallant Captain Reid, late commander of the privateer 'General Armstrong,' by Mrs. S. C. Reid, his wife." (Preble, p. 348.) Another Betsy Ross.

In conclusion, let me endeavor to impress upon you that in what is here so inadequately set forth, I have tried to prove, as far as the very unsatisfactory evidence we have access to at present permits, three points:

First. That the quite generally believed story that General Washington went to Betsy Ross with a design for a flag which he intended should become the national standard of the United States of America; and in which he deliberately incorporated elements of his own family coat-of-arms, is a gross injustice to the taste and the modesty of one of our greatest men, and one who was in all things a gentleman.

Second. That the exact reproduction of the East India Company's flag in our "Great Union Flag," our first national flag, and the foundation of the Stars and Stripes, could hardly have been mere chance. Remember that the only change required to transform the older flag into our present one was, substituting stars for the two crosses upon the blue canton, common to both. This evident origin of all the details of the flag, excepting the stars, is further proof of the falsity of the charge against Washington.

Third. The improbability, if not impossibility of the Betsy Ross incident having occurred in May or June of the year 1776, more than a full year before the Stars and Stripes were legalized or in any way mentioned; the story itself being unsupported by a single item of contemporaneous evidence.

Authorities consulted: Most important of all, that inexhaustible mine of flag-lore, *History of the Flag of the United States*, by Vice-Admiral Geo. Henry Preble. The work is, so far as I have been able to test it, so accurate and carefully written that one has little more to do than

select and arrange. *History of the National Flag*, by Captain Schuyler Hamilton. *Lossing's Field Book of the Revolution. Flags, Some Account of their History and Uses*, by A. Macgeorge, Edinburgh, 1881. *History of the Union Jack, etc.*, Barlow Cumberland, Toronto, 1900. *Le Drapeau de la France*, M. Sepet, Paris, 1873. *Recherches sur le Drapeaux Français*, Gustave Desjardins. Paris, 1874. *The Stars and Stripes, etc.*, by Peleg D. Harrison, Boston, 1906. *Our Flag*, by A. N. Whitmarsh. Histories of the Revolution. Histories of the discovery of America, especially John Fiske's and Wear's. The very ridiculous *History of the First United States Flag, and the Patriotism of Betsy Ross*, by Colonel J. F. Reigart. *Baker's Itinerary of Washington*.

Notes furnished me by Professor J. K. Laughton, the greatest English authority on the subject, and author of *Heraldry of the Sea*. Notes furnished me by William Forster, Records Department, India Office, London.

Not to mention books of reference, clippings from English and American journals, etc.

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